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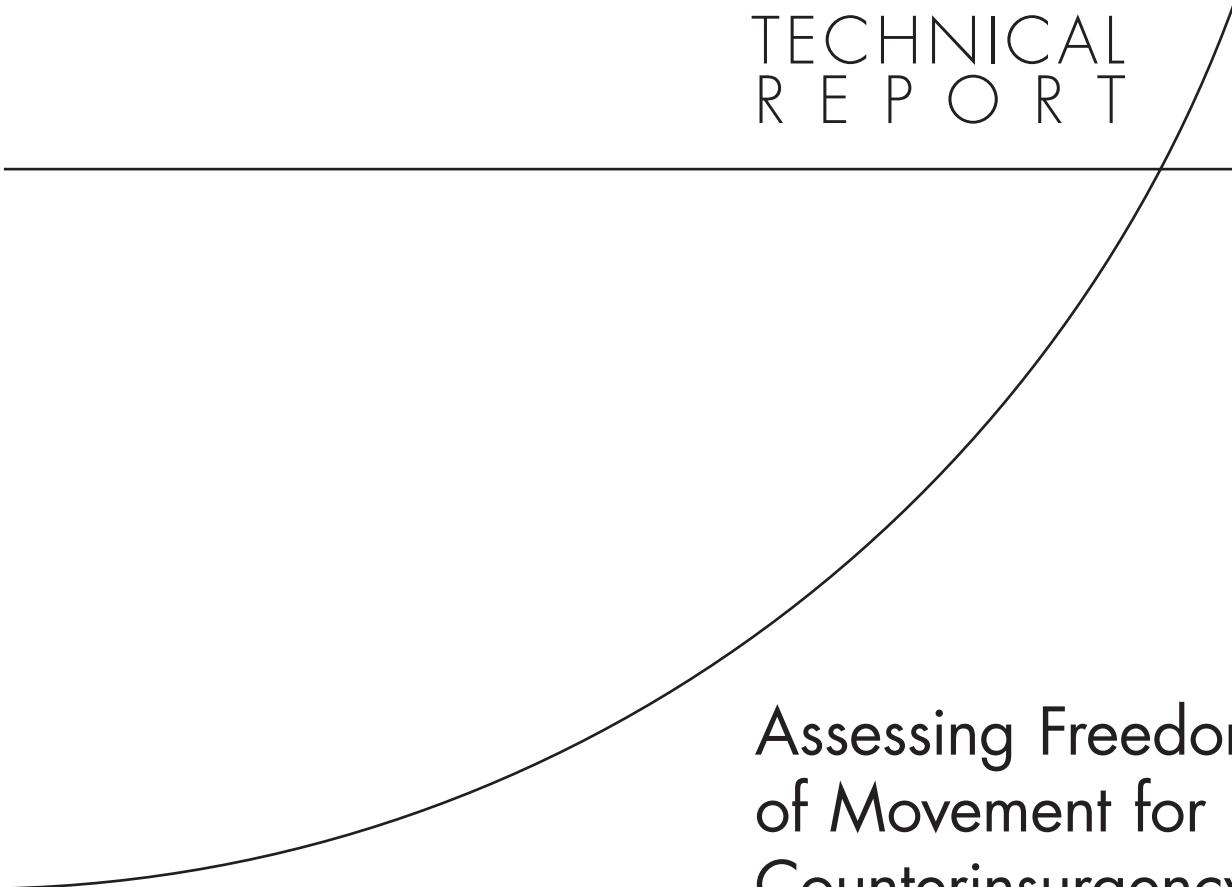
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TECHNICAL
REPORT



Assessing Freedom of Movement for Counterinsurgency Campaigns

Ben Connable, Jason Campbell,
Bryce Loidolt, Gail Fisher

Prepared for U.S. Forces–Afghanistan

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Preface

This report examines the ways in which military staffs might assess “freedom of movement” within the framework of a counterinsurgency (COIN) campaign assessment. The RAND Corporation has supported the development of military campaign assessment methodology and has directly participated in the assessment of the Vietnam, Gulf War, Kosovo, Iraq, and Afghanistan campaigns. Therefore, this report reflects both original research and findings drawn from the cumulative body of RAND work on the subject of military assessment. The results will be of interest to military staffs, policymakers, and subject-matter experts engaged in attempting to assess the Afghanistan COIN campaign, but the information and findings presented here are also intended to contribute to the broader COIN literature. Some or all of the findings in this report might be generalizable to prospective or other ongoing COIN campaigns.

This research was sponsored by U.S. Forces–Afghanistan, and conducted within the International Security and Defense Policy Center of the RAND National Defense Research Institute, a federally funded research and development center sponsored by the Office of the Secretary of Defense, the Joint Staff, the Unified Combatant Commands, the Navy, the Marine Corps, the defense agencies, and the defense Intelligence Community.

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Summary

Freedom of movement (FoM) is the degree to which individuals or groups have—and perceive that they have—the ability to move from place to place within a given environment as well as into and out of that environment. While doctrine and professional literature on the subject of FoM is sparse and often inconsistent, there are some clear indications that FoM is an important consideration for COIN tactics, operations, and strategy. The purpose of this report is to examine the ways in which U.S. military staffs assess FoM to help commanders and policymakers determine the success or failure of the counterinsurgency (COIN) campaign in Afghanistan. The information and findings are also intended to contribute to the broader COIN literature and might be generalizable to prospective or other ongoing COIN campaigns.

To determine how, why, and, in some cases, why *not* to assess FoM in Afghanistan, it is first necessary to both define the concept in the context of COIN and to understand how U.S. and coalition military staffs have considered FoM in operations and assessments in other contemporary operations. Official publications show that both U.S. and coalition military staffs have considered FoM to be an important facet of COIN operations in Vietnam, Iraq, and Afghanistan. Reports from all three conflicts describe efforts to improve FoM for friendly forces, to restrict FoM for insurgents, and alternatively improve or restrict FoM for civilians, depending on the circumstances. Examples of the U.S. and coalition focus on FoM can be found in the analysis of FoM in Vietnam War-era assessment reports, official reports on Iraq, and reports that focus on several types of FoM in Afghanistan. Senior military officers and defense officials often discuss FoM in the context of intermediate and long-range COIN strategy. However, FoM is mentioned only occasionally in COIN literature and in U.S. military doctrine. Descriptions of FoM tend to be made either in passing or with insufficient context. To date, there have been few efforts to clearly define FoM or explain how it fits within the context of campaign end state or campaign assessment.

In part because FoM is not precisely defined in the literature, neither U.S. military doctrine nor U.S. government publications on COIN provide clear instruction on how to assess FoM. Research for this report, which included an examination of assessment processes and reports, showed that most efforts to describe, develop, and assess FoM have been inconsistent and poorly aligned with one another. This general inability to successfully assess FoM within the framework of campaign assessment has undermined the ability of military commanders and staffs to determine progress or lack of progress toward national strategic end states and termination criteria.

This report examines the roots of the FoM concept in the literature, efforts to collect data to feed FoM assessment, and efforts to analyze FoM data through centralized assessment. The purpose of the analysis was as follows:

1. Describe what FoM is in both a very broad context and within the context of COIN.
2. Explain why FoM matters to counterinsurgents.
3. Describe the various aspects of FoM and explain how they might be assessed.
4. Analyze past and current efforts to assess FoM in Afghanistan.
5. Identify challenges that a theater assessment staff is likely to face when assessing FoM.
6. Recommend an approach to FoM assessment that will assist a theater assessment staff in developing a realistic and effective assessment process.

While the question of whether or not FoM matters for COIN was incidental rather than central to this study, research for this report revealed that the ability of civilians and other groups to move freely within and through the operating environment is relevant to COIN operations. It is also relevant for end-state considerations for Afghanistan, as well as for prospective COIN operations. This finding, which reflects an analysis of the literature, interviews, and direct observation, supports the notion that COIN campaign assessment would benefit from an analysis of FoM.

Theater assessment staffs in Afghanistan have few resources to guide their conceptual planning or to help them collect and analyze information that might help them explain FoM to the commander of the International Security Assistance Force (ISAF) or senior policymakers. However, despite this lack of clear guidance, both military and civilian leaders from the policymaker to the tactical operator level have identified a number of clear concepts and objectives for FoM in Afghanistan. They place a strong emphasis on improving FoM for civilians and reducing FoM for insurgents. These objectives are typically linked to the belief that FoM is a human right and a means for economic development and that improving FoM will improve the lives of Afghans to the point that they will not want to join or support the insurgency. Whether or not these assumptions are valid, they at least provide a framework for campaign assessment.

These assumptions and associated operations do not, however, indicate a clear and direct connection between improved civilian FoM, reduced insurgent FoM, and campaign end-state (or terminating) criteria that might be assessed by a theater assessment staff. Nor do these assumptions reflect the complexities or inherent contradictions in FoM. There has been insufficient effort to determine how perception and actual FoM are linked, how they might be correlated for assessment, or how some of the other factors identified in this report might affect FoM assessment. Furthermore, the linkage between what is perceived to be an adequate and sustainable level of civilian FoM and subsequent support from the government toward this end is tenuous at best. However, fostering FoM in government-controlled areas may influence Afghan civilians to support the government because increased FoM may give them faith in the ability of the security services to protect them from physical and economic harm. Assessing the relationship between the existence of FoM, indicators of popular satisfaction with FoM, and real, sustainable support for the government will require comprehensive and contextual analysis of a number of different variables.

An analysis of historical cases sheds some light on the ways in which counterinsurgents have attempted to address FoM. These cases, including Malaya, Thailand, Vietnam, India, and

Iraq, show that counterinsurgents have focused on ensuring FoM for friendly security forces, controlling civilian movement to isolate insurgents, and reducing FoM for insurgent cadres. In a few cases, counterinsurgents also focused on improving civilian FoM, but it is not clear that any counterinsurgents have considered civilian FoM in the context of the strategic end state. Although information on how counterinsurgents have assessed FoM in non-U.S. cases is limited, it seems that, at least in some examples, the host-nation government focused on developing civilian FoM in order to develop a sense of normalcy.

In contrast to other campaigns, ISAF has focused on developing civilian FoM as a strategic end-state condition. Past and current FoM assessment at ISAF and ISAF Joint Command (IJC) reflects a mix of approaches that rely on either a small set of proxy metrics or generalized reporting requirements that allow subordinate staffs to develop and report FoM metrics based on locally available information and local standards. Neither of these approaches has been optimal; both represent best efforts in the absence of greater resources and a more complete understanding of FoM and its relevance to ISAF strategic objectives. The nature of the FoM data collection and assessment efforts also reflects the lack of available data, difficulty in collecting relevant data through technical means, and, possibly, a reluctance to place undue collection and reporting burdens on subordinate commands.¹

The lack of a *precise* and broadly agreed-upon definition of FoM for all circumstances makes it difficult to task data collection: It is hard to collect information on something that is poorly defined and that changes unexpectedly and unevenly from place to place. Technical and other physical collection solutions can provide some insight into actual movement, and they can also show chokepoints that might restrict FoM. Some types of technical collection and assessment (of imagery data or ground moving target indicator data, for example) can be accomplished at the headquarters level, while other collection requires physical action on the part of tactical units. Physical collection may induce risk at the tactical level, so collection requirements deserve careful consideration. Technical and physical collection is most effective in assessing physical infrastructure, such as roads and bridges, and it can be very useful in assessing the ability of ISAF and the Afghan National Security Forces (ANSF) to move throughout the area of operations. It may be least useful in assessing combined perceptual and actual aspects of civilian FoM.

Collecting perception data is a seemingly straightforward task, and a number of polls already capture some of these data. However, some polls do not have sufficient granularity to show context. Few of the polling questions are precisely tied to a clear definition of FoM for the purposes of ISAF strategic assessment, and concerns the polling methodology may limit the overall utility of these data for assessment. There are a number of other resources that could help ISAF assess the perception of civilian and insurgent FoM, but these resources are not necessarily structured to fit into existing assessment processes.

The use of proxy metrics to determine FoM is a logical practice in the absence of better information. Because the concept of FoM is nebulous, most metrics might be described as proxy metrics to some extent: Every metric (or indicator) provides insight into the undetermined variable of FoM. If a proxy metric can show correlation with an agreed-upon standard for FoM, then it might be useful for assessment. However, in practice, it will likely show something less: The assessment staff will probably have to make some kind of subjective judgment

¹ This last point is not empirically proven, but this sentiment was reflected in numerous conversations and interviews with ISAF and IJC staff members between late 2009 and early 2011.

as to how the metric does or does not provide insight into FoM. There are some conceptual problems with applying proxy metrics, such as attack reporting, to FoM assessment, and any proxy metric must be reported with clear caveats.

Third-party reports provide good insight into possible collection and analysis methods for FoM assessment. An examination of reports by the U.S. Agency for International Development and Cooperation for Peace and Unity show that they were not designed to meet ISAF standards or to match up with ISAF objectives, but they do indicate how the physical collection process of click-counting (counting individual vehicle movement) can provide potentially useful data and how physical collection is limited by the COIN operating environment. Perception polling at the village level might also be useful in providing local context, but using samples to represent areas not covered by polls is problematic in COIN because security situations and perceptions can vary greatly from village to village, depending on the relative presence of ISAF, ANSF, Government of the Islamic Republic of Afghanistan (GIRoA) officials, nongovernmental organizations (NGOs), and insurgents.

An analysis of past and current efforts to assess FoM revealed some innovative assessment efforts. It also revealed inherent limits in the ability to assess FoM through centralized theater assessment processes:

- It is difficult to find a metric or set of metrics that captures FoM cleanly and precisely.
- Efforts to gather more information can unduly burden subordinate commands.
- A lack of data undermines centralized assessment.
- Finding an effective, structured approach to FoM assessment will require some cost-benefit analysis and a balance between context and aggregation.

Assuming that ISAF will continue to assess civilian FoM as a strategic objective, or as an indicator of strategic progress, assessment staffs will have to determine how to reconcile the dichotomy between increasing civilian FoM as a strategic objective and controlling civilian FoM as an operational objective. Further, staffs will have to determine how to differentiate between the effects of purposeful control of civilian FoM and environmental or insurgent restrictions on that freedom. Contextual analysis will probably be necessary to unravel these complexities.

Definitions of Freedom of Movement

Although a general definition of *freedom of movement* is possible, as mentioned earlier, the lack of a precise and broadly accepted definition that is applicable in all circumstances poses a challenge to data collection. In Afghanistan, coalition assessment staffs tend to focus on the degree to which civilians have more or less FoM. Because the purpose of this report is to support military assessment and decisionmaking in the context of ongoing operations, assessment of civilian FoM was at the center of this research effort. However, our analysis indicates that it is difficult and unhelpful to consider civilian FoM in a vacuum, and FoM for a range of actors must necessarily be factored into any assessment. The following definition of civilian FoM is derived from an analysis of the available literature on FoM, interviews conducted with tactical and operational staff officers, and interviews with assessment staff officers.²

² All definitions should be considered tentative proposals, and they are presented here to help guide the discussion in this report. The definitions are presented as formal recommendations with caveats in Chapter Four.

FoM for civilians: The ability and the perceived ability of Afghans (who do not work for the government, security forces, or NGOs or belong to insurgent groups) to move to and from a desired location at will and without undue danger, physical restriction, or economic burden in order to meet their needs.

Research for this report revealed that, in Afghanistan, FoM is also relevant for (1) ISAF, (2) ANSF, (3) Afghan government officials, (4) NGOs, and (5) insurgents. As with the definition of civilian FoM, these definitions are derived from the research for this report:

FoM for ISAF and ANSF: The ability and the perceived ability of ISAF and ANSF personnel to move to and from a desired location to achieve mission objectives without undue threat of attack or physical restriction.

FoM for GIRoA officials: The ability and the perceived ability of government officials to move to and from their residences or offices to any area necessary to fulfill duties without undue threat of attack or physical restriction.

FoM for NGOs: The ability and the perceived ability of NGO staff to move to and from an area requiring services at will and without undue danger, physical restriction, or economic burden in order to meet needs.

FoM for insurgents: The ability and perceived ability of insurgents to move to and from an area to transport supplies, conduct attacks, collect intelligence, or engage contacts without threat of attack, detention, or physical limitation.

Considerations for Building an Approach to Assess Freedom of Movement

Separating the freedom to move of any these various groups from that of the others presents substantial challenges. The assessment staff must weigh its capabilities and must recommend to the commander what it should and should not try to assess. However, this delineation of groups that need to move, and the different implications that their respective FoM can have for COIN objectives, should inform both the decisionmaking process and the analysis of information collected.

FoM has both perceptual and what this report refers to as physical or “actual” aspects. It is possible to have the perception of FoM when movement is physically or actually restricted, and it is also possible to have the ability to move but be too fearful to do so. FoM assessment has implications for—and is informed by—the assessment of security, economic development, and infrastructure. In theory, assessment should capture and analyze a mix of both perceptions and actual FoM information and determine how these two aspects of FoM differ or are interdependent. But the complexity of FoM makes it difficult to develop definitions, select metrics, and establish thresholds for FoM assessment; it is probably not possible to know how much FoM is necessary or sufficient for any given individual, from area to area, or over time. This means that establishing centralized time-series thresholds for any type of FoM would be particularly difficult, if not counterproductive and misleading.

Commanders and assessment staffs should consider the following points when developing an approach to FoM assessment and an assessment method:

- How should assessment differentiate between the five types of FoM identified in this report, if at all? Which data are useful for which type of FoM assessment, and which are useful for more than one type?
- What constitutes “normal” or (perhaps) “desirable” FoM from area to area? What do civilians want? Is it sufficient to be “satisfied” with security, or do they also want more? It is difficult, if not impossible, to assess civilian FoM without first understanding local needs.
- How can perception information be captured in a way that reflects local conditions and local needs (i.e., context), but in a format that can be aggregated?
- What are the various characteristics of physical threats, and how can information on these threats be captured?
- What is the confluence between perception and actual FoM in a specific area and across the theater?
- How can perception data be compared with actual reporting data in a way that produces an accurate, holistic picture of FoM?
- Are there elements of FoM that it is not possible to assess? Why?
- How should caveats be applied to FoM assessment to ensure that findings do not exceed the available data or methodology?

Considerations for Collecting and Assessing Freedom of Movement Data

Commanders and assessment staffs should consider the following points when developing and executing collection requirements for FoM assessment, as well as during the assessment of FoM data:

- There are at least five categories of FoM, each of which may complement or confound the other.³ These categories are distinct but not necessarily independent.
- Issues of scope and scale will make it difficult to collect information that accurately reflects FoM for civilians and insurgents across an entire theater; context matters.
- The fluidity of the COIN environment means that both the perception and reality of FoM can and will change often, quickly, and unexpectedly. Reporting will contain leading and lagging indicators and may not reflect ground truth by the time it is assessed.
- To assess FoM, it is necessary to measure both perception and reality, because perception might not match reality and reality might not match perception. Willingness to move, the ability to move, and actual movement might be considered as three separate variables or values in an assessment. It is possible to see actual movement coupled with a widespread perception that it is unsafe to move. In this way, improvement in actual movement might not benefit coalition objectives or improve perceptions of government legitimacy.

³ ISAF’s Afghan Assessment Group could also determine that one or more of these categories should be eliminated or combined. For example, it may view the NGO category as extraneous. It is listed here because it is mentioned fairly frequently in the literature and it seems to affect COIN outcomes. Other categories not considered in this report might also be useful for operations and assessment.

- The convergence of a purposeful coalition reduction of FoM and reports of high levels of FoM in insurgent havens can play tricks on time-series assessments of FoM indicators. It would be conceivable for an insurgent-held or -influenced area with high levels of FoM to see a drop in FoM as coalition forces clear and stabilize the area, and then a subsequent increase in FoM after the operation.
- Civilian FoM is not always desirable; in some cases, it is necessary to restrict FoM for operations (an important element of population control) while retaining the goal of improving overall FoM at the strategic level. Efforts to restrict FoM will shape reporting and assessments and must be carefully monitored.
- It is possible to have a high degree of civilian FoM in insurgent-held areas: Civilians can be happy with FoM in a way that does not support ISAF or Inteqal objectives.⁴ It is not easy—and in many cases not possible—to identify differences between civilians and insurgents for the purposes of FoM assessment.
- Increasing FoM for civilians may also increase FoM for insurgents and criminals: Improving infrastructure, reducing roadblocks, and taking other steps to improve civilian FoM may improve insurgent FoM because Afghan insurgents tend to blend in with the population.
- Efforts to gather more information can unduly burden subordinate commands, but a lack of data undermines centralized assessment. Finding an effective, structured approach to FoM assessment will require some cost-benefit analysis and a balance between context and aggregation, as well as a collaborative risk assessment with subordinate commands.

Recommendations

Chapter Four of this report expands on the proposed definitions for the five distinct categories of FoM, discussed earlier, and provides a step-by-step guide intended to help shape the development of a new assessment process or to improve FoM assessment processes already in use. Building an FoM assessment process requires a comprehensive analysis of national strategic end-state and termination criteria, the ISAF and Inteqal campaign plans, input from a number of ISAF staff sections, and a thorough cost-benefit analysis that takes into account detailed and up-to-date theater and unit collection capabilities. Therefore, by necessity, this is an internal process that should be conducted by a theater-level staff. The following recommendations for building an FoM assessment process are derived from research conducted for this report, as well as 16 months of research conducted on Afghanistan assessment processes for the U.S. Marine Corps Intelligence Activity:⁵

- Divide FoM assessment between a bottom-up contextual and a centralized process to address the simultaneous but somewhat paradoxical requirement for contextual understanding, which will help determine whether more or less FoM is needed in particular circumstances and will help provide the holistic understanding required for the commander and staff to determine whether progress is being made countrywide.
- Reevaluate and reconstitute the centralized assessment of FoM to better link FoM assessment to objectives. Clarify collection and reporting requirements for subordinate

⁴ *Inteqal*, the Dari and Pashto word for *transition*, is the designation used to identify the official transfer of security responsibilities in Afghanistan from ISAF to GIRoA.

⁵ For Connable, forthcoming.

elements, better analyze cost-benefit and risk calculations for tactical collection requirements, determine how assessment might address operational efforts to develop FoM, and effectively divide the focus between a bottom-up and a centralized assessment process.

- Accept that all FoM metrics are, to varying degrees, proxies for better, more accurate measurement and assessment. Attempt to tie metrics more closely to desired objectives and conditions.
- Reevaluate polling questions in official polls to ensure that questions related to FoM are directly linked to ISAF and Inteqal objectives and adequately inform theater assessment. They should also meet local and seasonal conditions and reflect local context in each area of interest to the greatest extent possible. Some collection should focus on what civilians want and need from FoM in each area.
- Separate the different types of FoM for assessment. Develop ways to assess ISAF/ANSF, GIRoA, NGO, and insurgent FoM (as needed by the ISAF commander) as enabling conditions or enabling indicators to better support and assess civilian FoM.

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Abbreviations

ANQAR	Afghanistan National Quarterly Assessment Report
ANSF	Afghan National Security Forces
COIN	counterinsurgency
CPAU	Cooperation for Peace and Unity
EBA	effects-based assessment
FM	field manual
FoM	freedom of movement
GIRoA	Government of the Islamic Republic of Afghanistan
GPS	Global Positioning System
GVN	Government of (South) Vietnam
IED	improvised explosive device
IJC	International Security Assistance Force Joint Command
ISAF	International Security Assistance Force
JP	joint publication
MOE	measure of effectiveness
MOP	measure of performance
NATO	North Atlantic Treaty Organization
NGO	nongovernmental organization
RC	regional command
UN	United Nations
USAID	U.S. Agency for International Development

Introduction

The purpose of counterinsurgency (COIN) campaign assessment is to provide military and policy decisionmakers with an understanding of how a campaign is progressing toward achieving the strategic end state defined by national policy. Assessment is typically a military task, and in Afghanistan theater-level assessment, groups in the International Security Assistance Force (ISAF) and ISAF Joint Command (IJC) are tasked with assessing the ISAF campaign plan and supporting assessment of the joint and combined transition plan (Inteqal).¹ These efforts tend to rely on a modified version of effects-based assessment (EBA), as defined in U.S. and North Atlantic Treaty Organization (NATO) doctrinal publications. EBA requires the analysis of strategic end states to find and apply measures of effectiveness (MOEs), measures of performance (MOPs), and indicators that might help determine progress.² Table 1.1 provides a comparison of MOEs, MOPs, and indicators, and Figure 1.1 shows how MOEs and MOPs are derived from strategic and operational objectives and how they fit within the campaign assess-

Table 1.1
Effects-Based Terminology for Assessment

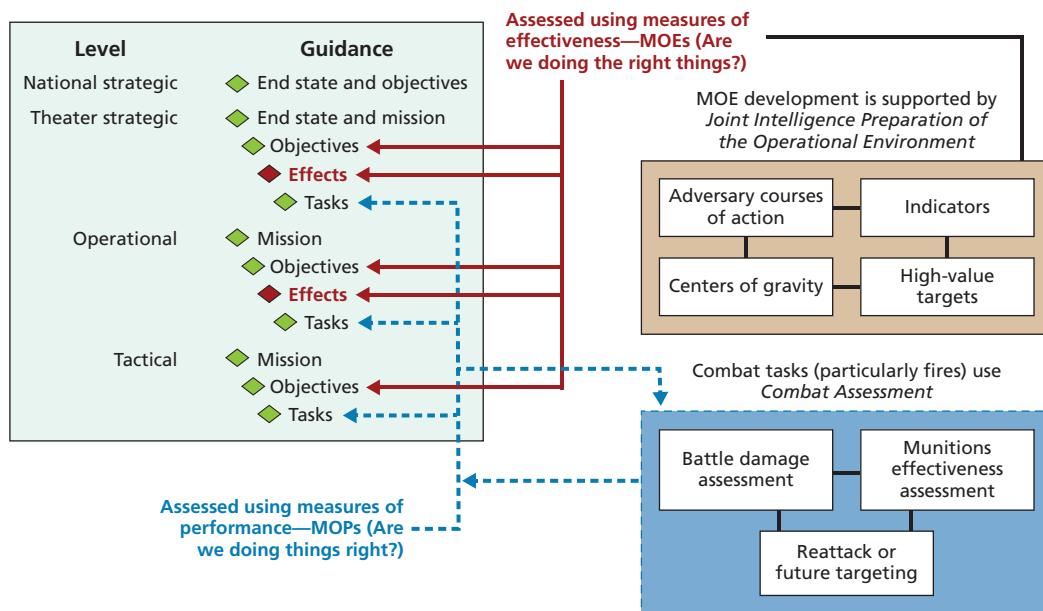
MOE	MOP	Indicator
Answers the question: Are we doing the right things?	Answers the question: Are we doing things right?	Answers the question: What is the status of this MOE or MOP?
Measures purpose accomplishment	Measures task completion	Measures raw data inputs to inform MOEs and MOPs
Measures <i>why</i> in the mission statement	Measures <i>what</i> in the mission statement	Information used to make measuring <i>what</i> or <i>why</i> possible
No hierarchical relationship to MOPs	No hierarchical relationship to MOEs	Subordinate to MOEs and MOPs
Often formally tracked in formal assessment plans	Often formally tracked in execution matrixes	Often formally tracked in formal assessment plans
Typically challenging to choose the correct ones	Typically simple to choose the correct ones	Typically as challenging to select correctly as the supported MOE or MOP

SOURCE: HQDA, 2010, p. 6-3, Table 6-1.

¹ *Inteqal*, the Dari and Pashto word for *transition*, is the designation used to identify the official transfer of security responsibilities in Afghanistan from ISAF to the Government of the Islamic Republic of Afghanistan (GIRoA).

² These are colloquially referred to as “metrics” although they do not necessarily fit within strict scientific definitions of *metric* or *metrics*. For the purposes of this report we will use the term *metrics* to encompass measures of effect, measures of performance, and indicators.

Figure 1.1
The Effects-Based Assessment Process



SOURCE: U.S. Joint Chiefs of Staff, 2007, p. IV-20, Figure IV-6.

RAND TR1014-1.1

ment framework. Taken together, the table and the figure represent standing U.S. military doctrine on EBA. Assessment staffs in Afghanistan use effects-based language from doctrine and build some assessments from MOEs and MOPs, but other assessments are narrative or consist simply of annotated time-series charts.³

Figure 1.1 shows how military staffs at each level of command should feed assessment with information and (to varying degrees) analysis. At the theater level and below, each staff section focuses on assessing “effects” and “performance” using MOEs and MOPs as defined in Table 1.1. Intelligence reporting also feeds the assessment process (i.e., joint intelligence preparation of the environment). This system was developed to address conventional warfare and not irregular operations like COIN; this is obvious in the focus on battle damage assessment and associated actions at the tactical level. In this process, the equivalent of the battalion staff has no role in measuring or assessing effects, but in COIN, the battalion staff may be the one most capable of delivering relevant input into the assessment process. This incongruity undermines the ability of all military staffs to develop a comprehensive COIN assessment that is anchored in accurate and contextual information.

Together, Table 1.1 and Figure 1.1 also generally describe the process by which military commanders and staffs determine their centralized, or “core,” metrics for assessment. Identifying, defining, and vetting metrics has historically proved challenging for assessment staffs in Vietnam, Iraq, and Afghanistan. In the Afghanistan campaign, one metric (or MOE)—freedom of movement (FoM)—has been particularly elusive. ISAF has made efforts to address the challenges of FoM assessment: In 2010, a FoM working group established by ISAF explored

³ A more detailed explanation of EBA can be found in Connable, forthcoming, and the U.S. Army’s Field Manual 5-0, *The Operations Process* (HQDA, 2010, Appendix H).

the issue and developed a proxy methodology to address this gap in the assessment process, but the findings from the working group did not fully describe the challenges of collecting data and assessing FoM. As of early 2011, theater-level assessment entities at NATO, IJC, and subordinate commands in Afghanistan continued to try to capture and assess this metric in the absence of a common definition, means of data collection, and substantive link to strategic end state.⁴

Purpose

The target audience for this report is U.S. military commanders, staffs, and experts engaged in efforts to assess the COIN campaign in Afghanistan. The purpose of the report is to inform the target audience and the broader COIN community as to how and why a military staff might assess FoM to support decisionmaking at the tactical and theater levels of command. To explain how and why (or why not) to assess FoM, it is important to examine the concept and challenges of FoM in some detail. Because it is necessary to address FoM for COIN in general terms to explain its role in assessment, an ancillary purpose of this report is to examine FoM as a condition and objective in irregular warfare and in Afghanistan. Consequently, this report should also inform policy debate over COIN end-state conditions. The specific purposes of this examination are as follows:

1. Describe what FoM is in both a very broad context and within the context of COIN.
2. Explain why FoM matters to counterinsurgents.
3. Describe the various aspects of FoM and explain how they might be assessed.
4. Analyze past and current efforts to assess FoM in Afghanistan.
5. Identify challenges that a theater assessment staff is likely to face when assessing FoM.
6. Recommend an approach to FoM assessment that will assist a theater assessment staff in developing a realistic and effective assessment process.

Research Methodology

After conducting an initial literature review, we approached our analysis along two parallel tracks and developed key findings and recommendations by comparing the findings from these two tracks. One track involved analyzing FoM as a concept in order to ascertain theoretical best practices, while the other entailed an examination of past and current efforts to assess FoM in Afghanistan. The findings reported here reflect a convergence of these two distinct research efforts.

Track one research involved a review of historical case-study literature, COIN literature by prominent theorists and practitioners, and U.S. joint and service doctrine on operations and COIN. This track was also guided by iterative discussions between RAND researchers after each phase of review, discussions with assessment experts, and interviews with members of theater- and regional-level staff officers in Afghanistan. Track two research also relied on interviews and iterative discussions, as well as a review of past and current official documentation

⁴ IJC has developed a definition and issued an order on metrics, but the order is restricted.

on FoM and FoM assessment in Afghanistan. This track examined how assessment staffs had attempted to assess and report findings on FoM at various commands in Afghanistan.

Issues Not Addressed in This Report

This report assumes that ISAF will continue to rely on a centralized, effects-based approach to assessment that is informed by subordinate analyses. Therefore, it does not make recommendations for fundamental changes in the assessment process; findings are designed to fit within the current process. A separate annex to this report addresses some specific assessment issues that pertain directly to ongoing operations. The annex was delivered to an appropriate theater assessment group in Afghanistan and is not available for public release.

How This Report Is Structured

This report is structured to reflect the two-track approach of the overall research effort. It begins with a background discussion of the concept of FoM in various contexts in Chapter Two. The literature review addresses some of the root documentation of FoM in human rights publications but focuses on traditional and doctrinal publications on COIN. The chapter then addresses basic concepts of FoM in COIN and frames some of the challenges that assessment staffs are likely to face in assessing FoM. Chapter Three examines past efforts to assess FoM in COIN. It also examines assessment methods, technical collection methods, and third-party (nonmilitary) assessment efforts in Afghanistan. Building from the two tracks (theory and practice), Chapter Four presents recommendations designed to help commanders and assessment staffs build a logical, practical, and comprehensive approach to assessing FoM in the context of Afghanistan.

How the Concept of Freedom of Movement Can Inform Assessment

This chapter reflects our analysis of the concept of FoM in COIN operations and how it can be used to inform assessment. It begins by looking at FoM from a very broad perspective by describing international theories that have been applied to FoM assessment and then examines the ways in which FoM is presented in the COIN literature and doctrine. The intent of the literature and doctrine review is to show what is and is not available to theater assessment analysts in Afghanistan and to identify gaps and inconsistencies in FoM terms and theories.

Roots of the Concept: Literature, History, and Doctrine

On the surface, “freedom of movement” is self-defining—it is the freedom to move—but a self-defining condition or assessment indicator is very difficult to capture, measure, analyze, and describe. What exactly does FoM mean? Where did the concept originate, and why is it associated with success in COIN? This section briefly examines the roots and definitions of FoM in three contexts: (1) the historical literature on COIN, (2) international human rights standards, and (3) U.S. COIN doctrine.

Counterinsurgency Literature and Freedom of Movement

The historical and case-study literature on COIN only loosely addresses FoM. A review of historical literature, for example, revealed scattered mentions of FoM in a range of contexts. Different authors—some counterinsurgents, some insurgents—mention either improving or restricting FoM for counterinsurgent military units, government officials, civilians, non-governmental organizations (NGOs), and insurgents. Most of the literature focuses on FoM for counterinsurgents and insurgents, however. Not surprisingly, the literature on COIN frequently recommends reducing insurgent FoM and improving counterinsurgent FoM, while insurgent literature mirrors these recommendations. Civilian FoM is mentioned sporadically, and often in the context of imposing restrictions to separate civilians from insurgents. In his book *Counterinsurgency*, David Kilcullen includes “civilian accessibility” in a list of recommended metrics but does not expound on the concept,¹ while David Galula believed it was necessary to

¹ Kilcullen, 2010, p. 63. In *Counterinsurgency*, Kilcullen generally addresses government officials’ movement and refers to civilian FoM only as an indicator of insurgent presence. He describes civilian “accessibility” as an indicator. According to Kilcullen, civilian accessibility is the degree to which civilian government officials can move about without insurgent harassment. He contends that greater accessibility shows less insurgent presence or control and that less accessibility shows more insurgent presence or control.

control civilian movement during a period of operations that is analogous to the “hold” phase in contemporary COIN doctrine.² In *Defeating Communist Insurgency*, Sir Robert Thompson also describes civilian-control measures, defining FoM in restrictive terms.³ John J. McCuen places an emphasis on the need for “mobile warfare” and on restricting insurgent movement throughout his often-overlooked *The Art of Counter-Revolutionary War*. He also calls for the creation of “forbidden zones” through which insurgents would be prevented from traveling and describes ways of restricting civilian FoM to isolate civilians from insurgents.⁴

The classic “how-to” literature on insurgency (e.g., Mao Tse-Tung’s *On Guerrilla War*, Che Guevara’s *Guerrilla Warfare*, Vo Nguyen Giap’s *People’s War, People’s Army*, and Carlos Marighella’s *Minimanual of the Urban Insurgent*) indicates that insurgents depend on FoM to conduct successful guerrilla operations and that they place a high value on restricting the movement of counterinsurgents.⁵ For example, Guevara states, “The fundamental characteristic of a guerrilla band is mobility,” and he dedicates significant attention to describing ways of reducing the mobility of the counterinsurgent.⁶ A survey of case-study literature revealed a historic focus on population control or pacification (e.g., Malaya, Vietnam).⁷ Most mentions of FoM are in the context of guerrilla or counterguerrilla operations (COIN kinetic operations), while there is little emphasis on ensuring free movement for the population.

Counterinsurgents could look to the COIN literature to inform efforts to improve coalition FoM and reduce insurgent FoM, and they could also find sufficient sources to recommend context-appropriate efforts to restrict civilian FoM. However, they would be hard pressed to find sufficient justification in the literature to link civilian FoM to a strategic end state. The following section explores the more likely sources of civilian FoM for COIN operations and assessment.

Civilian Freedom of Movement and Fundamental Human Rights

Civilian FoM is an essential element of “human security,” itself a loosely defined concept that serves as the basis for (or a way to describe) rights theories and international rights treaties. Article 13 of the Universal Declaration of Human Rights, a United Nations (UN) General Assembly proclamation, states, “Everyone has the right to freedom of movement and residence within the borders of each state,” and, “Everyone has the right to leave any country, including

² Galula discusses population control in several places in *Counterinsurgency Warfare* (1964/2005). For example, the third of his eight principal steps that counterinsurgents must take to succeed is to establish contact with, and control of, the population. In this step, he recommends measures to effect control of the population, which necessarily includes FoM (pp. 81–86). Later, he lists two restrictions for villages that are being secured: a night curfew and control over visitors (p. 118).

³ Thompson, 1966/2005, p. 112.

⁴ See McCuen, 1966, especially pp. 235–239.

⁵ See, e.g., Mao Tse-Tung, 1961/2000, pp. 96–98, and Marighella, 1972/2008, pp. 62–65.

⁶ Guevara, 1961/2008, p. 20.

⁷ For example, a district report from Vietnam described restrictions on Viet Cong FoM, and both the Malaya and Vietnam hamlet relocation programs were designed to control the access and movement of the population. See U.S. Military Assistance Command, Vietnam, 1968, p. 18. The *Commander’s Summary of the MACV Objectives Plan* defines FoM in two contexts: First, “when normal functions of an effective local government are conducted and there is freedom of movement both day and night, except for [Government of (South) Vietnam] administrative controls,” and, second, to “reduce enemy movement”—specifically, “by saturating an area with ambushes, enemy movement can be substantially reduced. Defense of the hamlets and villages will be facilitated by the fact that the enemy will find it difficult to assemble for an attack” (p. 25).

his own, and to return to his country.”⁸ Similarly, the UN’s International Covenant on Civil and Political Rights defines “liberty of movement” as an “indisputable condition for the free development of a person,” adding that “the right to move freely relates to the whole territory of a state.” Some UN documents tie FoM to economic freedom and development, but only in very general terms.⁹ These various efforts to enshrine the right to movement are subjective and do not define FoM or explain why the freedom to move is important in a general sense or in terms of COIN.

Official statements on NATO strategy in Afghanistan conflate FoM for civilians with the concept of fundamental human rights, thereby tying FoM to a coalition strategic end state. In 2009 the commander of ISAF stated that FoM is one of the “basic elements of life,” while an official NATO documentary video on the contribution of Afghan security forces to FoM declared, “Freedom of movement is a fundamental human right.”¹⁰ According to Article 39 of the Constitution of Afghanistan, which draws on the Universal Declaration of Human Rights, “Every Afghan shall have the right to travel and settle in any part of the country, except in areas forbidden by law,” and Afghans also have the right to freely travel into and out of Afghanistan.¹¹ Although research for this report uncovered no explicit link between civilian FoM, human rights, and COIN strategy in official military doctrinal publications, it appears that policymakers, commanders, and staffs have linked increased civilian FoM with both human rights and a successful end state in Afghanistan. It is unclear whether this linkage is derived from Article 39 of the Constitution of Afghanistan or whether it was developed through other analysis.¹²

Historical cases and doctrine provide some limited insight into the links between FoM, human rights, and COIN strategy. As discussed in greater detail in Chapter Three, both sides in the Vietnam War identified FoM as a fundamental human right. Senior U.S. military officers serving in Iraq stated that free and fair elections there were not possible without FoM, and in 2004, then-Deputy Secretary of Defense Paul Wolfowitz highlighted that FoM was included as a fundamental human right in the U.S.-sponsored Transitional Administrative Law for Iraq.¹³

There may be an inherent link between the widely acknowledged right to FoM and COIN strategy in doctrine. Since at least the late 1960s, official U.S. COIN strategy has been population-centric. Joint Publication (JP) 3-24, *Counterinsurgency Operations*, clearly spells out the need to create “legitimate social, political, economic, and security institutions that meet the population’s general expectations,” adding, “The support of the people is the most vital factor in the long-term success of any COIN effort.”¹⁴ U.S. Army Field Manual (FM) 3-24, *Counterinsurgency*, states that “each side aims to get the people to accept its governance or authority as

⁸ UN, 1948.

⁹ See, e.g., Jolly and Ray, 2006.

¹⁰ Sciutto, 2009; NATO, 2008.

¹¹ Government of the Islamic Republic of Afghanistan, 2004, Article 39.

¹² The roots of FoM in ISAF campaign strategy are unclear. Discussions with ISAF staff officers indicated that at least some current staff are unclear as to how FoM developed prominence in the campaign assessment process.

¹³ Cucolo, 2010; Wolfowitz, 2004.

¹⁴ U.S. Joint Chiefs of Staff, 2009b, pp. III-5, III-1.

legitimate.”¹⁵ If a population perceives FoM to be a fundamental human right, then that same population might perceive the lack of FoM to indicate a lack of government legitimacy. Therefore, improving FoM might improve the perception of government legitimacy. Because the literature insufficiently addresses the link between civilian FoM and COIN strategy, this logic chain is hypothetical and presumptive rather than empirical. Further, it is not clear that any generalizable rule tying civilian perception of FoM to human rights—and then to government legitimacy—could be established for COIN doctrine or even across a specific theater, such as Afghanistan. The link between civilian FoM and COIN strategy is examined in greater depth in the remainder of this chapter.

Doctrine and Freedom of Movement

Military staffs tend to rely on a common understanding of complex issues to provide a baseline for planning and operations. While operations necessarily diverge from doctrine as specific circumstances, friction, and the fog of war require, it would seem useful to have a common baseline of understanding for broad terms, such as FoM, to prevent uncoordinated actions and poorly informed, ad hoc solutions to common problems. But U.S. military doctrine and the *U.S. Counterinsurgency Guide* touch only briefly on the subject of FoM.¹⁶ None of the documents reviewed for this report clearly defines the term, and they provide little guidance for either operational or assessment staffs as to how they might incorporate FoM concepts into planning or assessment. Doctrine has more to say about controlling the population in COIN, but those references address only the situations in which restricting FoM is important, not those in which expanding it is a priority. What to do in these latter circumstances is implied in discussions of development and economic activity in COIN, but not directly and not in a way that helps in developing or employing assessment mechanisms. Principal references include the following:

- JP 1-02, *Department of Defense Dictionary of Military and Associated Terms*, does not define FoM but briefly mentions “freedom of action” in several sections.¹⁷ (Also see FMs 3-0 and 5-0, below.)
- JP 3-0, *Joint Operations*, briefly mentions “freedom of movement” for enemy forces but does not clearly define the term. It generally implies that FoM is the enemy’s ability to move without threat of friendly action.¹⁸ This capstone joint publication—arguably the principle source for joint operational doctrine along with JP 5-0—does not define or explain any type of FoM to policymakers, commanders, or joint staffs.
- JP 3-24, *Counterinsurgency Operations*, describes FoM as a “prerequisite for insurgency” on p. VIII-13, but it does not explain why; “freedom of action” for insurgents on p. II-26; “freedom of movement” for insurgents on p. II-26; “freedom of maneuver” on p. X-11; and freedom of movement for criminals on p. A-2. It does not define or explain these terms in detail. In general, it implies that counterinsurgents should try to restrict the ability of insurgents to move freely, but it fails to address the issue in a way that would provide

¹⁵ HQDA, 2006c, p. 1-1.

¹⁶ See U.S. Government Interagency Counterinsurgency Initiative, 2009.

¹⁷ See U.S. Joint Chiefs of Staff, 2011.

¹⁸ See U.S. Joint Chiefs of Staff, 2010, p. III-7.

a clear foundation for the development of theater strategy, interim operational objectives, or end state.¹⁹

- JP 5-0, *Joint Operation Planning*, mentions “freedom of action” and “freedom of [operational] theater access” in terms of friendly forces maneuver, but it does not define these terms. It also does not clearly explain why these freedoms are operationally or strategically important, nor does it expound on any of them.²⁰
- U.S. Army FMs 3-0 (*Operations*) and 5-0 (*The Operations Process*) mention “freedom of action,” which they use to describe the extent to which U.S. operations orders allow subordinates the freedom to act without direction, or the freedom to move about the battlefield unrestrained by obstacles or enemy action. However, like JPs 3-0 and 5-0, they do not explain how or why freedom of action is important in a way that would help a staff shape planning, operations, and assessment.²¹
- U.S. Army FM 3-24 (and Marine Corps Warfare Publication 3-33.5), *Counterinsurgency*, describes methods of population control from pp. 5-21 to 5-23, FoM for insurgents in various sections, and FoM for civilians in a list titled “Example of progress indicators” on p. 5-28. It briefly mentions that FoM for people, goods, and communications is a “classic measure to determine if an insurgency has denied areas in physical, electronic, or print domains.” This quote represents the depth of the examination of FoM in the publication. As in other doctrinal literature, this brief mention of FoM is insufficient to explain its precise connection to insurgent activity, when it is good or bad, or how it might be measured.²²
- The *U.S. Government Counterinsurgency Guide* mentions the “freedom to conduct economic activity” (p. 22) as an element of human security and as a requirement for the successful operation of NGOs. These brief mentions are not expounded upon in any meaningful way.²³
- Marine Corps doctrine generally does not refer to FoM but discusses friendly and enemy maneuver at length. The 1940 *Small Wars Manual* states, “When information of hostile forces is lacking or meager, recourse to patrolling for the purpose of denying the opposing forces terrain and freedom of movement may be the only effective form of offensive action open to the commander.”²⁴

Military staff officers depend on doctrine at least in part to guide them in the development of plans, operations, and assessment, yet doctrine provides almost no guidance on why FoM matters to COIN operations, strategy, or end state, or how and why a staff should assess FoM for the commander. Therefore, almost all campaign assessment of FoM is necessarily ad hoc, placing undue burden on subordinate units attempting to capture and report information to feed a poorly understood metric and on assessment staff struggling to understand a very complex and challenging issue.

¹⁹ See U.S. Joint Chiefs of Staff, 2009b.

²⁰ See U.S. Joint Chiefs of Staff, 2006.

²¹ See HQDA, 2008, 2010.

²² See HQDA, 2006c.

²³ See U.S. Government Interagency Counterinsurgency Initiative, 2009.

²⁴ Headquarters, U.S. Marine Corps, 1940, p. 18.

Tying Freedom of Movement to Counterinsurgency Objectives, Strategy, and End State

And I want you to imagine a society in which there is no freedom of movement, in which you are confined to your house and to your compound and to your field, in which you are so suppressed and oppressed by the Taliban and the narcobarons, that you're not able to move out of Marja and go see your family in Lashkar Gar. The Taliban control all the road junctions and all the exits to the area. They tax you for all of the crops and in particular the poppy that you're forced to grow.

—Major General Nick Carter, Commanding General, Regional Command South²⁵

Accurate and relevant assessment requires a clear understanding of both how and why strategy and operations were conceived, as well as what strategy and operations are expected to achieve. This section builds on the sparse FoM literature and doctrine to describe (1) why FoM might matter in COIN and in Afghanistan, (2) how FoM could be linked to theater objectives in Afghanistan, and (3) the different types of FoM and how they relate to each other in broad terms. Literature and doctrine hint at five separate types of FoM. The descriptions presented here are purposely concise; defining each of these categories requires a deeper understanding of the issues that affect FoM and FoM assessment. More detailed definitions and caveats are presented in Chapter Four. It might not always be necessary to consider all five of these categories for operations or assessment, and this list should not preclude the consideration of other types of FoM.

It is difficult to define the term *civilian* for the purposes of assessment. A civilian might be an Afghan farmer who interacts with government officials only when he or she needs a permit or assistance, but it could be a *jirga* (council) leader who has a semigovernmental role. An Afghan “civilian” could be a part-time insurgent or an insurgent supporter. In any event, it is very difficult to separate insurgents from the civilian population for the purposes of assessment. Any effort to assess insurgent FoM will probably require assistance from an intelligence staff, though it should be noted that the intelligence staff will not have comprehensive knowledge either. And, because both civilians and insurgents generally benefit from increased FoM and suffer from decreased FoM, assessing these two categories distinctly may not be possible.

With these points in mind, we derived the following categories of FoM from the research for this report:

1. Civilian: the civilian (defined, for the purposes of this report, as local civilians who are not insurgents, NGO staff, police, or government officials) population’s perception that individuals are safe to move without undue threat of danger or undue economic burden, and the civilian population’s ability to act on that perception
2. Friendly and host-nation military and police (in the Afghan case, Afghan National Security Forces, or ANSF): ability to maneuver and to control lines of communication
3. Government officials: ability to move to and from anywhere duties require
4. NGO (or local and foreign humanitarian assistance providers): ability to move to and from areas that require assistance
5. Insurgent: ability to move without security-force restrictions.

²⁵ Carter, 2010.

It might seem logical at first to assume that civilian FoM would necessarily extend to FoM for NGO staff and government officials, but this has not been the case in practice. Civilians affiliated with neither the government nor NGOs could be free to move while insurgents target government officials or NGOs. Conversely, officials or well-guarded NGO staff might have adequate security to move while most civilians do not. These three groups might also move in different patterns and in different areas. Therefore, for the purposes of campaign assessment, it may make sense to address all five of the FoM categories separately. It is important to note, however, that the categories are interdependent to varying degrees from place to place and over time, and some factors affect everyone regardless of affiliation. For example, the destruction of a bridge over an otherwise impassable gorge affects ground movement for all five categories.

Each of the five categories affects, and is affected by, ISAF operations intended to improve security, governance, and development in Afghanistan—the three “lines of operation” typically identified in planning and assessment documents. The following three sections address how these lines of operation relate to FoM and subsequently to strategic objectives.

Security, Stability, and Freedom of Movement in Afghanistan

U.S. COIN doctrine recognizes that the first step in a COIN campaign, and the first phase in any specific COIN operation, is the establishment of population security. FM 3-24 describes the phased approach to COIN: clear-hold-build. This approach has been modified to “shape-clear-hold-build-transition” (or variations of these steps) since the manual’s publication in 2006, but security remains an important first step and, ideally, a sustained condition in any operation. The manual states that “COIN efforts should begin by controlling key areas. Security and influence then spread out from secured areas.”²⁶ By inference, then, securing access points and routes to control and, if necessary, restricting movement—at least temporarily—are integral parts of doctrinal COIN operations.

These doctrinal criteria are broadly reflected in U.S. and ISAF strategy for Afghanistan and in the focus of COIN operations there. ISAF focuses on both population and route security, and the *U.S. Government Integrated Civilian-Military Campaign Plan for Support to Afghanistan* links FoM to “population security,” advising counterinsurgents to “[i]ncrease security on major roads for improved freedom of movement for people and agricultural goods and protection against narcotics-related violence and intimidation.”²⁷ Security concerns revolve around the control of modes of access to population centers and the restriction of insurgent FoM to improve stability. The Chairman of the Joint Chiefs of Staff identified route security and population control as key elements of the plan to secure the city of Kandahar: “We will establish freedom of movement along the ring road and build a bypass south of Kandahar. And we will better control access to the city itself along its main arteries.”²⁸ Security operations focus on attacking insurgents to create FoM for civilians, or sometimes simply to reduce insurgent FoM to improve overall security. For example, an April 2011 operation against an explosive device cell leader in Kandahar was described as an “effort to create more freedom of movement for the local citizens living within the province.”²⁹ Another operation in Kandahar Province

²⁶ HQDA, 2006c, p. 5-18.

²⁷ U.S. Government, 2009b, p. 19. The plan lists FoM as a “priority objective” for population security on page 5.

²⁸ Garamone, 2010.

²⁹ ISAF Joint Command, 2011e.

was described as “a deliberate clearing operation aimed at disrupting the Taliban’s freedom of movement.”³⁰ Operations designed to specifically affect insurgents can also be defensive in nature. In Regional Command (RC) North, Afghan National Police were assigned to secure a number of locations to “deny insurgent freedom of movement.”³¹ In at least one case, a commander viewed population security as a means of reducing insurgent FoM:

As the local Afghan’s life improves, as he enjoys the benefits of improved security, development and reconstruction, he begins to believe that [the Afghan government’s] vision of the future is a better alternative to the life he led under the Taliban, and he begins to help coalition forces deny the Taliban *freedom of movement*, logistical support, and money.³²

Ultimately, all these security operations are conducted with the intent of improving stability in an effort to set the stage for transition to Afghan control and, presumably, to help ensure that the Afghans can sustain security and stability beyond the transition phase. Movement security might be considered either an interim or enabling objective along the path of the campaign arc toward transition, as well as an enduring strategic condition.

Governance and Freedom of Movement in Afghanistan

According to FM 3-24, “The primary objective of any COIN operation is to foster development of effective governance by a legitimate government.”³³ The manual specifically encourages the establishment of governance during the “hold” phase of COIN operations. It states that the counterinsurgent should “[e]stablish a firm government presence and control over the area and populace” and “a government political apparatus to replace the insurgent apparatus.”³⁴ This would require not only capable government officials with appropriate authority (e.g., a governor, judge, health worker with access to suitable medical supplies) but also conditions allowing these officials to move into and out of the operational area without undue threat of violence or hardship. Therefore, FoM for government officials is an enabling condition for specific COIN operations (e.g., an operation to secure a specific city). Any COIN strategy that calls for lasting stability should also consider government FoM to be a strategic end-state criteria. ISAF strategy seems to be in alignment with these assumptions. For example, an IJC news release on the progress of Operation Moshtarak stated, “Freedom of movement is the key to delivering governance—in the form of traditional *shuras* as well as in health services, education and the judiciary.”³⁵

Because effective representative governance tends to depend on popular perception of legitimacy, all five categories of FoM are relevant to governance: If security forces cannot move to protect the population, the government loses legitimacy; if NGOs are incapable of delivering services, legitimacy is similarly questioned; free movement of insurgents is a direct challenge to government legitimacy. Civilian FoM can be more directly linked to the government’s ability

³⁰ ISAF Joint Command, 2011d.

³¹ ISAF Joint Command, 2011a.

³² Colonel David Furness, quoted in ISAF Joint Command, 2010d; emphasis added.

³³ HQDA, 2006c, p. 1-21.

³⁴ HQDA, 2006c, p. 5-20.

³⁵ ISAF Joint Command, 2010b.

to deliver services. Typically, civilians are required to travel to government offices to conduct transactions or attend to other needs, such as obtaining permits, filing claims, or attending court. If civilians are unable to travel to government offices, they cannot benefit from these services, and it becomes more difficult to establish government legitimacy—a situation that can be compounded if government officials also cannot move to and from their place of duty.

Infrastructure, Economic Development, and Civilian Freedom of Movement

COIN doctrine describes the need to build infrastructure and economic opportunity during the “build” phase of a COIN campaign, or during specific COIN operations. Among other possible projects, it suggests “building and improving roads.”³⁶ ISAF and its subordinate elements have placed an emphasis on highlighting successful infrastructure projects, and many of these projects are tied to the 2001 U.S. presidential Afghanistan Road Initiative, which sets goals for the development of road networks to improve civilian FoM and economic development.³⁷ A survey of official statements and public affairs releases from ISAF, the U.S. Department of Defense, and the U.S. Agency for International Development (USAID) showed that both the military and civilian agencies tasked with prosecuting the war are investing heavily in building road, rail, and air infrastructure to improve civilian FoM. Figure 2.1 depicts a 2011 road infrastructure development project in Marjeh, Afghanistan, and Figure 2.2 shows an air-strip constructed in 2006 in Zabul Province, Afghanistan.

Official sources directly link improved FoM to improved economic opportunity, which, in turn, appears to be identified with the establishment of both stability and normalcy. In the words of GEN David H. Petraeus, the commanding general of ISAF,

Sound strategy demands the use of all the instruments of power. This vision for Afghanistan and the region makes a compelling case that transport and trade can help restore the central role of Afghanistan in Central Asia. By once again becoming a transport hub, Afghanistan can regain economic vitality and thrive as it did in the days of the Silk Road.³⁸

An official U.S. Central Command briefing identifies four “priority” infrastructure projects to support these objectives: (1) completion of the Ring Road and Kabul-Herat Highway; (2) completion of the trans-Afghan rail lines; (3) construction of a Turkmenistan-Afghanistan-Pakistan-India natural gas pipeline; and (4) completion of electrical transmission lines linking Central Asia, Afghanistan, northern Pakistan, and India.³⁹ Analyses by noted subject-matter experts also recommend the development of internal and cross-border infrastructure.⁴⁰ Generally, such literature and combat reporting from Afghanistan emphasizes the importance of roads and bridges in the more geographically restricted areas of Afghanistan, where the loss or creation (or repair) of a single road or bridge can respectively isolate or connect a sizable region and population. Figure 2.3 depicts the Froj Bridge in the mountainous Panjshir Province,

³⁶ HQDA, 2006c, p. 5-21.

³⁷ See USAID’s *Status of Presidential Initiatives* for fiscal years 2003, 2004, and 2005 (USAID, 2003, 2005a, 2006).

³⁸ Rosenberger, 2010, p. 6. This statement is attributed to Petraeus in several documents, but the original source is not available. This particular source is an official U.S. Central Command briefing, so the quote’s inclusion is officially sanctioned by the combatant command that oversees U.S. participation in the Afghanistan campaign.

³⁹ Rosenberger, 2010, p. 10.

⁴⁰ See, e.g., Starr and Kuchins, 2010.

Figure 2.1
Road Construction Project in Progress in Marjeh, Afghanistan, 2011



SOURCE: ISAF photo.

RAND TR1014-2.1

Figure 2.2
Airfield Construction Completed in Zabul Province, Afghanistan, 2006



SOURCE: USAID photo by Jennifer Ragland, in USAID, undated(c).

RAND TR1014-2.2

Figure 2.3
Froj Bridge, Panjshir, Afghanistan



SOURCE: Ashcraft, 2011.

RAND TR1014-2.3

which is noted to be “the sole access point for more than 6,000 families in Anaba District, Afghanistan.”⁴¹ The destruction of this bridge would likely have a significant impact on the lives of these 6,000 families, as well as on the ability of security forces and government officials to develop this population’s trust and support.⁴²

Gen. James N. Mattis, commanding general of U.S. Central Command, also reinforced the strategic importance of infrastructure development, stating that such development facilitated economic opportunity, which, in turn, generates incentive for reconciliation and the reintegration of insurgents. He called these projects and associated objectives “fundamental to a sound counterinsurgency campaign”:

We are also pursuing infrastructure initiatives—for example, building roads, rail, and installing electrical grids and transmission lines—to capitalize on Afghanistan’s potential as a Central Asian economic hub. A regional transport network facilitates the creation of private sector jobs and provides additional incentives for reconcilable elements of the insurgency to abandon the fight. Ultimately, such economic development reduces the need for U.S. forces and underpins long-term transition activities and is fundamental to a sound counterinsurgency campaign.⁴³

This statement links infrastructure development to economic development, and it seems to identify development as an interim objective that will contribute to the strategic end state (i.e., transition to Afghan control). Infrastructure development would allow Afghans to get goods to market and travel to markets to purchase those goods, and it would allow engineers

⁴¹ Ashcraft, 2011.

⁴² It might also prevent insurgents from entering the district or from leaving the district to attack other population centers. The dichotomy inherent in physical freedom and restriction is addressed later in this chapter.

⁴³ Mattis, 2011, p. 21.

and construction equipment to travel from point to point to undertake nongovernment projects. This economic activity might help reduce some of the root causes of insurgency, or at least improve the perception of government legitimacy.⁴⁴ At least in this view, economic development is a stepping-stone to eventual success and not a strategic end-state condition in itself. Therefore, improving infrastructure for FoM in Afghanistan might be considered an enabling condition or interim campaign objective. Chapter Three addresses means of assessing infrastructure specifically in relation to FoM.

Freedom of Movement as a Condition and an Indicator of Success or Failure

This section ties together the concepts of FoM for COIN, the link between FoM and strategic end state, and the link between FoM and strategic end state in Afghanistan. The purpose is to identify a connection between FoM and assessment for the Afghanistan campaign and to present a theoretical foundation for the assessment of FoM in ISAF and its subordinate commands.

This report addresses all five types of FoM listed earlier in this chapter, but it takes a particular interest in civilian FoM. While it is often impossible to truly isolate civilian FoM from other types of FoM for assessment purposes, it is possible to be clear about how indicators might relate to civilian FoM, specifically, and to analyze how other forms of FoM do or do not affect civilian FoM. Joint and service doctrine states that COIN is population-centric and that the support of the people is the “most vital factor” in long-term success. But perhaps more importantly for theater assessment groups in Afghanistan is the position articulated in General Petraeus’s counterinsurgency guidance: “The decisive terrain is the human terrain. The people are the center of gravity. Only by providing them security and earning their trust and confidence can the Afghan government and ISAF prevail.”⁴⁵ If popular security and support are the key to long-term success, then anything that builds sustainable popular security and support should contribute to victory. Sustainable popular support can be achieved only when the root causes of the insurgency have been addressed; temporary accommodations are insufficient for sustainability.⁴⁶ These root causes vary from place to place and over time. In Afghanistan they may even vary from village to village. However, it is possible to draw some broad assumptions about basic human requirements. The concepts behind the UN’s *Universal Declaration of Human Rights* provide some insight into what these needs might be: freedom to move from place to place without unreasonable restriction, fear, threat to physical security, or undue economic burden. Therefore, where FoM exists, it *might* indicate the presence of peace and security. By these basic hypothetical standards, if a *significant* or *sufficient* degree of freedom to move exists in territories not under insurgent control, the counterinsurgent should have made *some* progress toward sustainable victory.⁴⁷ In some situations, civilian FoM could be one of the pillars of success in a COIN campaign. Statements by ISAF officials presented earlier in this chapter reinforce this notion and seem to anchor civilian FoM to ISAF end-state or terminating criteria.

⁴⁴ While much of the literature on COIN and Afghanistan ties the lack of economic opportunity to the proclivity of civilians to join or support an insurgency, empirical evidence of these ties is contested.

⁴⁵ Petraeus, 2010a.

⁴⁶ A study of 89 post–World War II insurgencies showed that, in most cases, counterinsurgents gained lasting victory only when root causes were addressed (Connable and Libicki, 2010, p. 164).

⁴⁷ In this case, *significant* or *sufficient* could be considered a threshold qualifier for assessment.

For assessment, it might be very difficult to link FoM with support for GIRoA. It might be possible to have FoM as it is defined by ISAF and still not have a way to show how it has directly affected the population's support for the government. This is particularly true when considering narrow aspects of FoM. For example, simply showing that there is more or less movement on highways does not indicate more or less support for GIRoA; it is possible in some circumstances to show correlation between these two variables but not defensible causation. Indeed, an area completely controlled by insurgents (i.e., not contested by ISAF or ANSF) might have good FoM; in the mid-1990s, improving travel on roads by removing roadblocks and illegal shakedowns was one of the factors that made the Taliban an improvement (in the eyes of many Afghans) over the warlords. While perception reporting can show popular sentiment, this sentiment can be misleading or fleeting. Some subject-matter experts debate the often-stated official position that greater economic opportunity will necessarily reduce support for insurgents and increase support for the government. For example, Andrew Wilder of Tufts University, the former director of the Afghanistan Research and Evaluation Unit, has said, “[A]s far as I can see, there's very little evidence that poverty, or the lack of infrastructure and health care in Afghanistan, are major causes of the conflict.”⁴⁸ In general, more detailed and contextual reporting on FoM will help assessment staffs tie FoM indicators to lasting support for GIRoA, to the extent that a relationship exists and can actually be established.

Civilian FoM could be considered a means to achieving strategic objectives, and the degree to which civilian FoM is possible might be an end-state indicator or *terminating criterion*. Three of the other four types of FoM could be considered enabling conditions or enabling indicators (insurgent FoM is a disabling condition or indicator), because they affect the ability of the counterinsurgents to create civilian FoM. We summarize these roles as follows:

- Civilian FoM is a means to achieve strategic objectives.
- ISAF and ANSF FoM is an enabling condition or indicator.
- GIRoA FoM is an enabling condition or indicator.
- NGO FoM is an enabling condition or indicator.
- Insurgent FoM is a disabling condition or indicator.

For example, if government officials cannot get to work, the population will remain dissatisfied with services; if friendly military forces cannot enforce security because their movements are restricted, the population will not feel secure; if NGOs cannot get to remote areas due to movement restrictions, people in these areas might be less satisfied with the government's ability to support them. In other words, all types of FoM are intrinsically linked to the others, and each of the three enabling conditions or indicators is likely to shape civilian FoM for better or for worse.

The following sections discuss some of the challenges that assessment staffs will confront as they attempt to address these issues. There are inherent contradictions between the theater assessment process and the concept of FoM, and there are also conflicts between the various types of FoM.

⁴⁸ Quoted in McNeil, 2009.

Scope, Scale, and the Interconnectedness of the Operating Environment

To assess FoM, it is necessary to consider why people need FoM, in what sectors they need it, and to what degree they need it. Freedom to move can be defined and assessed through a wide or narrow lens, or at a large or small scale. In other words, it can encompass a variety of different factors, and it can be viewed as a theater-wide condition or a local condition. A theater-wide approach might ask the question, “Do Afghan civilians have FoM?” Or, “Do the Taliban and other insurgent groups have FoM?” Assessment in this case would draw in technical reporting, subordinate analysis, and raw data from across the country to feed comprehensive analysis, thus providing a countrywide picture. Without context, however, these questions are very difficult to answer. The more localized conception would attempt to account for local conditions and would involve a distributed, flat approach to FoM assessment that provides local context not filtered by intermediate commands. There is a middle-ground option: Assess FoM on a province-by-province or district-by-district basis for the purposes of centralized analysis. All of these approaches have strengths and weaknesses, and any approach chosen for assessment should reflect the realities of the COIN operating environment.

The following section describes additional issues and conditions related to scope, scale, and interconnectedness that will affect assessment.

How Varying Conditions and Needs Shape Assessment

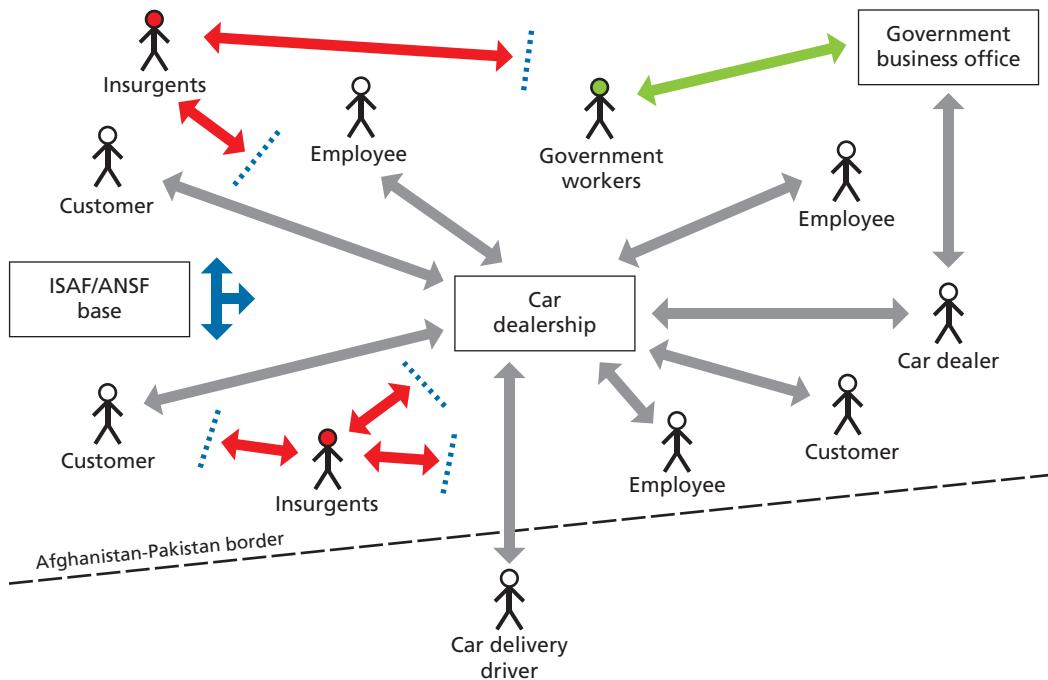
Theater staffs are already cognizant of the fact that there is no such thing as an “average” Afghan civilian, and the heterogeneity of the Afghan population is particularly relevant to FoM assessment. There are significant differences between the types of movement required by urban poor, urban elite, rural farmers, rural traders, and international businesspeople conducting cross-border commerce. Even within a single rural village, individual Afghans or families have differing needs, perceptions, and concerns. For example, one family might depend on subsistence farming and need the freedom to travel only 500 meters to the local well, while another family might depend on a cash crop that requires transportation to a regional market. Thus, some Afghans have little or no need to travel, and others might only travel to a farmer’s market infrequently but wholly depend on those few trips for survival. At some point, both families might wish to visit relatives in a distant village, and any family might consider this kind of travel either a necessity or a convenience. Any individual or group of civilians could depend on several different types of FoM. For example, a successful car dealer in an urban area—the kind of entrepreneur whom ISAF hopes to encourage and protect—might depend on the following types of FoM to sustain his business:

- the ability to move from his home to his business
- freedom for his employees to move from their homes to his business, perhaps from different areas
- the transport of imported automobiles across the border from Pakistan and into the urban area
- customers’ ability to visit his lot to buy cars, as well as customers’ perception that there is sufficient FoM to warrant the purchase of a car
- ISAF or ANSF freedom to move to facilitate the freedom for civilians to move

- government workers' ability to move to their jobs so the car dealer can obtain permits and conduct similar business⁴⁹
- restrictions on insurgent FoM.

In this single case, an individual is affected by very local FoM concerns (Can he get to work?), theater-level cross-border economic movement, and several different types of enabling FoM conditions. Figure 2.4 shows the intricate and interconnected ways in which FoM is necessary to sustain even a single business, such as a car dealership in Afghanistan. It shows the dealer who needs to be able to travel (at a minimum) to the dealership and to the government office to obtain permits; the government workers who must be able to travel back and forth to work; the employees who must be able to travel back and forth to the dealership; the customers with the same need; ISAF and ANSF personnel who need to be able to circulate throughout the area to ensure FoM for the dealer, employees, customers, and government workers; and the insurgents who are attempting to disrupt various aspects of movement in the area. This depiction is stylized and simplified. In reality, the government employee could also be a customer at the dealership; the dealer might need to travel to Pakistan to arrange for car shipments; the dealer, some of the customers or employees, or the government workers might also be insurgents or insurgent supporters; and the insurgents might also be customers. In addition, this

Figure 2.4
Notional Freedom of Movement Requirements to Sustain a Car Dealership



NOTE: Red indicates insurgents and insurgent movement; blue indicates ISAF/ANSF movement; dashed blue lines indicate ISAF/ANSF efforts to block insurgents; green indicates GIRQA officials and GIRQA movement; and gray indicates civilian movement.

RAND TR1014-2.4

⁴⁹ This notional scenario assumes that a functional government office is present and that laws and regulations on car sales exist and are followed. This was not necessarily a safe assumption in Afghanistan as of 2011.

depiction does not touch on the *perception* of FoM for any of the parties, which is as important as the physical or actual aspects of FoM.

The same issues affect the way in which the assessment staff should perceive the other categories of FoM. Some insurgent groups may be dependent on cross-border support, while others may be self-sustaining in their local areas through taxation, criminal activity, or other pursuits. Some ANSF units will require the ability to move over long distances to support outlying areas, while others may provide stationary security for key facilities. Some government officials working in a district center may need to move only between their homes and their offices, while others (e.g., a provincial governor) should be moving throughout the province to visit outlying areas on a fairly regular basis.

Considering Scope, Scale, and Interconnectivity for Centralized Assessment

Issues of scope, scale, and interconnectivity tend to confound centralized metrics. Painting FoM with a broad brush risks obscuring layers of context that might make the assessment inaccurate or misleading: The subsistence farmer and the car dealer have very different needs. Subordinate assessment of FoM down to the district or subdistrict level would provide context and greater accuracy, but this kind of information is difficult to aggregate. This is particularly true because subordinate assessments will necessarily contain varying types of information; a unit in a relatively stable area providing transition assistance to ANSF and GIRoA might focus on civilian FoM for economic development (to the extent that it is able to do so), while a unit conducting clearing operations in a more violent area might focus on ANSF and insurgent FoM for security and stability (again, to the extent that it is possible to attain that level of granularity). Aggregating these data might produce misleading and confusing results. Precluding units from carrying out assessments with a focus on what they need simply to improve the aggregate data would be counterproductive. Similarly, reports from Kabul or Jalalabad will differ in form and context from reports originating in southern Helmand Province or a rural village in Nangarhar.

There is no simple solution to the challenges of scope, scale, and interconnectedness posed by the complex COIN operating environment when conducting centralized assessment. However, this report identifies hypothetical solutions to help assessment staffs cope with these challenges.

Reality and Perception: The Two Sides of Freedom of Movement

This section examines two distinct aspects of FoM identified through research and existing practice: the perception that FoM does or does not exist and the physical or “actual” ability to move. The purpose of this section is to describe these two aspects of FoM in some depth to help assessment analysts find the best way to understand FoM from a more holistic perspective.

Freedom can describe both a physical and a perceptual condition. It is possible to be physically free to move but simultaneously terrified to do so, or to be willing to move despite the likelihood of incurring terrible risk. Therefore, assessment of FoM should capture and analyze a mix of information on both perception and actual FoM and should determine how these two aspects differ or are interdependent. But the complexity of FoM makes it difficult to define, to select metrics, and to establish thresholds for centralized FoM assessment; it is probably not possible to know how much FoM is necessary or sufficient for any given individual, from area

to area, or over time. This means that establishing centralized time-series thresholds would be particularly difficult. When centrally assessing civilian FoM, a theater-level assessment staff should consider the following questions:

- How can perception information be captured in a way that reflects local conditions and local needs, but in a format that can be aggregated?
- What are the various characteristics of physical threats, and how can information on these threats be captured?
- What is the confluence between perception and actual FoM in a specific area and across the theater? In other words, does perception match reality?
- How can perception data be compared with actual reporting data in a way that produces an accurate, holistic picture of FoM?

Actual Restrictions on Movement

Both violent and nonviolent environmental conditions can restrict FoM. Actual violence results in physical harm or undue economic hardship. For civilians, harm could manifest in intended or unintended insurgent attacks (e.g., violent intimidation, victim-operated improvised explosive devices, or IEDs, intended for ISAF personnel), criminal activity (e.g., carjacking, kidnapping), or collateral violence from coalition-on-insurgent combat. Economic hardship could manifest as insurgent taxation at informal checkpoints or unofficial taxation (corruption) at government checkpoints. Violence can be generated by anyone at any time, and for the purposes of theater-level assessment, it is essentially unpredictable.⁵⁰

Violence is not the only factor that might restrict actual movement. Physical infrastructure, weather, and geographic limitations can have an equally significant impact on all five categories of FoM (civilian, ISAF/ANSF, government, NGO, and insurgent). Damage to roadways can prevent or slow the movement of people, animals, carts, and vehicles, and the lack of sufficient roads, bridges, or even footpaths also affects actual FoM. Snow, rain, heat, cold, and darkness all affect the actual ability to move from place to place at various times. According to Jørgen Eriksen and Tormod Heier, seasonal snowfall is a significant impediment to Taliban FoM because it disrupts the use of motorbikes, a preferred method of transportation.⁵¹ Distance, mountains, water features, and built-up terrain also impair the physical ability to move. These factors can be affected by ISAF/GIRoA projects in some places (e.g., road and bridge

⁵⁰ Some analysts have had success in predicting very localized attacks using large quantities of data on a specific geographic area over time. However, this microlevel prediction is extremely time-consuming, requires high-quality data that are often in short supply in the COIN environment, and is not broadly applicable at the theater level. Conversely, analysis of Afghanistan violence data shows that there is generally more violence in the summer and less in the winter. However, this gross pattern is not necessarily predictive in any one year, nor can it be assumed to represent conditions in all areas at all times.

⁵¹ In their article “Winter as the Number One Enemy? Lessons Learned from North Afghanistan,” Eriksen and Heier (2009, p. 67) elaborate on the importance of this factor:

The Taliban’s ability to sustain a high degree of mobility relies mainly upon motorbikes and other lightweight vehicles. This approach is extremely flexible for swift and decisive off-road movements, particularly as operations are pursued along paths and fragile tracks inaccessible to ISAF’s heavy armoured vehicles. These transport methods also provide insurgents with a high operational tempo and a large amount of freedom of movement; factors often regarded as a prerequisite for surprise, local dominance, and protection against ISAF’s rather static but overwhelming and accurate fire-power. Deep snow, however, severely breaks down the insurgents’ mobility concept, as tactical maneuvers take for granted customized roads and accessible terrain. . . . [T]his may have a severe impact on insurgents’ relocation abilities and may impose a more static and predictable pattern, rendering them more vulnerable.

building, repairs), while others are beyond human control (e.g., rain, distance when traveling via a specific mode of transportation).

Before considering how actual restrictions on FoM might be assessed and affected, staffs should determine which restrictions are within their power to affect and which should simply be reported and analyzed.

Perceptual Restrictions on Movement

Now my children can walk safely and easily to school. The cars move faster and the drive is smoother. Now it's much easier for me to take my fruit and vegetables to the market. This paved road is very good.

—*Sultan Mohammad, Afghan civilian*⁵²

People—civilians, soldiers, government officers, aid workers, and insurgents—make decisions based not only on what they see but also on what they believe to be true. Sometimes perceptions match reality, but in many cases, reality and perception are asynchronous. A civilian or soldier might believe that insurgents control a certain road when in fact they do not. This belief—that insurgents control the road, in this example—also has an impact on FoM, whether or not insurgents actually control the road and have seeded it with victim-operated IEDs. Inversely, a civilian or soldier might believe that a road is safe, when, in fact, insurgents had seeded it with IEDs. In this case, the perception of FoM is false and ultimately misleading both for the individual affected and for anyone attempting to assess FoM.

Inaccurate perception can be costly to both individuals and the strategic objectives of the counterinsurgent. Sometimes, inaccurate perceptions can generate actual costs. For example, a person who believes that a road is closed may not travel or may take a circuitous route that is more expensive in terms of time, fuel, and wear and tear on vehicles. This perception that the road is closed might also lead to the belief that the government is incapable of providing security and economic opportunity, thereby reducing the perceived legitimacy of the government. Inversely, this person could believe that a closed road is in fact open, so any effort to gauge opinions of government legitimacy could reflect false impressions that would not survive the first attempt to travel down the closed road.

Perception also affects the other FoM categories discussed earlier. For example, an ISAF convoy commander might perceive that a certain road is dangerous at a certain time of day. This belief might shape the convoy's schedule and route. A district governor might believe that a bridge has been repaired when in fact it has not and thus might waste valuable time attempting to travel to visit constituents in a distant village. An NGO worker might believe that his or her organization has absolute FoM throughout a certain area when, in fact, insurgents are specifically targeting the group due to its affiliation with GIRoA. Insurgents might be cowed into remaining immobile and inactive if they perceive that ANSF personnel have imposed effective controls over routes in a specific area, even if this is not the case.

Assessing Perception and Actual Freedom of Movement Together

As discussed in greater detail in Chapter Three, ISAF tends to assess civilian perception of FoM through polling. This is probably the most effective means of assessing perception, but it

⁵² USAID, undated(b).

is also fraught with complications. Polling can be misleading because of the lag between the collection and analysis of polling data. By the time relevant information reaches theater-level assessment offices, much of it is already dated. More importantly for assessment, it is very difficult to link perception and actual FoM at the theater level using aggregated data. Barring detailed, time-sensitive, all-source analysis or timely and contextual input from tactical units or civilian agents, there is no way to tell whether a positive perception of FoM in a specific district reflects actual conditions or whether the inability of the district's population to move goods to market in the following month will burst a bubble of positive perception. The difficulty of uniting perceived and actual FoM means that it might be unwise to consider polling data a good proxy for actual conditions. The following section presents some additional considerations for FoM assessment.

Additional Considerations

Freedom of Movement Is Often Tentative

Both perception and reality can change rapidly and unexpectedly. A single IED attack in a relatively secure area can reshape the population's perception (people are no longer willing to travel to market along the main road) or ability to conduct commerce (people are no longer able to travel to market along the main road because it has been cratered). Similarly, a successful coalition operation, the withdrawal of an insurgent element, a road construction program, or an astute messaging campaign can rapidly reshape FoM for the better. *FoM is always a reversible condition.* Both perception and reality can change in both directions, change rapidly, and change often. Indicators can also lead (e.g., perception of FoM can drop in advance of a major operation) or lag (e.g., people remain fearful of movement long after an area is secure, or indicators do not emerge until well after a situation has changed).

The tentative nature of FoM is due not only to the unpredictable nature of violent acts (e.g., attacks) or environmental conditions (e.g., a heavy snowdrift across a road) but also to the fact that people in difficult circumstances (COIN) tend to find ways around man-made and natural obstacles to meet their particular needs. Insurgents faced with aggressive ISAF/ANSF checkpoint and route-control operations often find alternate routes or means of transportation. An increase in inspection activities on the Afghanistan-Pakistan border might restrict insurgent movement to an extent, but insurgents might find that they can just as easily transport personnel across informal border crossings on horseback. Military forces can bypass downed bridges by bringing forward earth-moving equipment, government employees might bribe their way through hostile checkpoints, and NGOs can negotiate with local leaders to improve access to restricted areas.

Assessment staffs should pay close attention to the date of their information and consider how obstacles to FoM for all categories might be bypassed.

Individual Cost-Benefit Analyses Guide Decisions to Move

Ideally, assessment of FoM reflects the willingness and ability of people to move from point to point as well as actual movement to determine whether people are traveling when they need to do so. Chapter Three shows that ISAF and some third-party groups have invested in efforts to track physical movement along specific routes and at specific times to determine whether actual movement has increased or decreased. Actual movement is often conflated with

increased FoM and extrapolated to show increased government legitimacy. But willingness, ability, and actual movement potentially have separate values: People might move even when they are afraid, so movement does not necessarily reflect popular support for the government or insurgents (i.e., movement alone does not indicate popular support for anyone by anyone). Individual civilians will make a cost-benefit analysis regarding movement: They will determine for themselves whether the potential risk of movement from point to point outweighs the benefit of moving, and, if necessary, they will overcome perceptual or actual obstacles. A farmer whose family depends on the sale of a harvested wheat crop might knowingly risk lives to move a crop to market, and someone desperate to obtain medical treatment will find a way around an IED crater or a downed bridge. People sometimes decide to accept physical or economic risk for emotional rather than logical reasons. Religious fatalism may overcome fear, or someone accustomed to years of violence may simply accept that life is dangerous (this is particularly relevant in Afghanistan). Conversely, irrational fear can prevent movement even when a person believes and knows that it is safe to move. In war, and particularly in war-torn Afghanistan, it is not wise to assume that Western interpretations of rational cost-benefit analysis and behavior apply when assessing FoM.

It is possible to consider the factors that would go into individual or even group cost-benefit analyses for movement, including the following, among others:

- reason for travel
- perception of danger or hardship associated with travel
- importance of the reason for travel relative to the perception of danger or hardship
- subjective factors that might overcome the perception that danger or hardship objectively outweighs the reason for travel (e.g., religious fatalism, family commitment)
- financial cost of travel weighed against the ability to bear the cost, influenced by subjective factors.

Inherent Theoretical and Practical Contradictions

COIN tactics and the COIN operating environment present other inherent contradictions that further confound assessment of FoM. This section is by no means comprehensive in that it does not present all possible contradictions, but it does introduce two issues that will demand consideration by the assessment staff.

Increasing Freedom of Movement for Civilians Also Helps Insurgents

Increasing FoM for civilians will necessarily increase FoM for insurgents (as well as criminals) because insurgents in Afghanistan typically do not wear uniforms, and they live among the population. Therefore, these two types of FoM—civilian and insurgent—are closely linked in a way that is not necessarily conducive to coalition objectives. Building a new road might improve civilian access to markets, but it also improves insurgent access to targets (or poppy and illicit gem markets). Conversely, setting up government checkpoints may reduce insurgent FoM, but it would also reduce civilian FoM (though it may only inconvenience civilians who are not insurgents while the consequences may be much worse for those who are). There is also potential conflict between the other types of FoM. For instance, increasing ISAF and GIRoA FoM might lead to an increased presence of heavy military convoy traffic on main roads. This

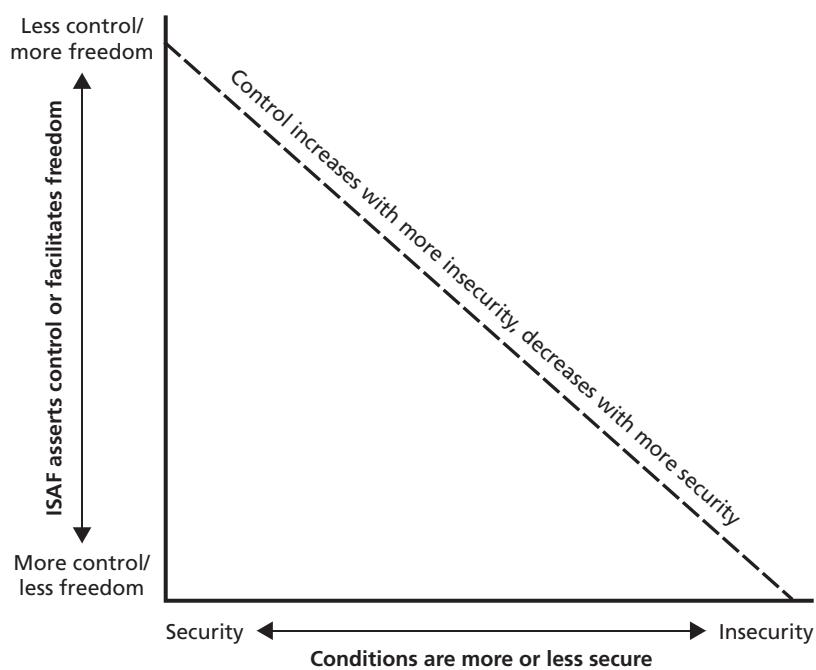
might, in turn, encourage insurgent attacks along these roads, reducing civilian perceptions of FoM. At the very least, the convoy traffic might slow movement or raise civilian anxiety levels. Government officials and NGOs are similarly caught in the middle.

Freedom of Movement for Civilians Is Not Always Desirable

Although this report shows that civilian FoM may be a reasonable end-state criterion, FoM for civilians is not always desirable during a COIN campaign. Both historical case studies and recent experience in both Iraq and Afghanistan show that it is often necessary to restrict the movement of the population to reduce the influence of insurgents in a particular area. U.S. doctrine reflects these lessons. FM 3-24 recommends the application of population-control measures during the “build” phase of operations, such as checkpoints, curfews, pass systems, limits on extended travel, and limits on visitors to the controlled area.⁵³ The manual describes U.S. COIN operations in Tal Afar, Iraq, designed to physically control the movement of people and goods into and out of the city.⁵⁴ In this case, the coalition purposefully restricted the FoM of the citizens. Perceptions of FoM probably suffered in the short term, but in the long term, the degree of security established through the implementation of control measures allowed for greater and more sustainable FoM.

Figure 2.5 shows how population-control measures in response to threat levels can determine FoM. In areas with poor security, it may be necessary to control the population and thus

Figure 2.5
Freedom of Movement and Population Control: Possible Scale to Threat Level



RAND TR1014-2.5

⁵³ HQDA, 2006c, p. 5-21.

⁵⁴ HQDA, 2006c, pp. 5-22–5-23.

reduce FoM, but as security improves, it may be possible to reduce controls and increase FoM. This is a notional depiction intended to show how control might scale to threat in COIN; it does not reflect plotted data. It is derived from an analysis of COIN case studies and COIN doctrine.

The figure suggests that any effort to assess civilian FoM using centralized assessment will show periodic decreases and subsequent increases in countrywide FoM as a result of purposeful ISAF and ANSF operations. As units conduct clear-and-hold operations, FoM may decrease in that specific area, and as they shift to build and transition in these areas, FoM may increase. For example, while ISAF and GIRoA forces are successfully improving FoM in RC North and RC West, they might simultaneously and purposefully reduce FoM in the south and east to inhibit insurgent FoM and to separate the population from the insurgents. In this case, theater analysis of FoM across all RCs will reflect both the increase and purposeful decrease of civilian FoM, showing mixed results—or perhaps negative results, depending on previous conditions in the south and east—in time-series analyses. These changes in value may be practically distinct from any impact that insurgents or economic development might have, but separating and identifying correlation at the theater level might be difficult. This dynamic illustrates that, devoid of context, FoM cannot be taken as a good or bad condition.

Further, shifts in perception and actual FoM in areas undergoing active ISAF/ANSF movement-control operations might lead to fluctuations in theater-level perceptions and actual movement reports. Because theater-level metrics are aggregated, it would be necessary for theater-level assessment groups to (1) understand that these operations are causing a reduction in perceived and actual FoM in this area, (2) know that this reduction is reflected in the reporting of the aggregated statistics, and (3) explain this aberration in the theater assessment report. Barring extensive and in-depth analysis by assessment groups, and in the absence of tight coordination between assessment officers and operations officers, it might be very difficult to meet these three standards. As a result, theater-level assessment reports on FoM might reflect a temporary or extended drop in FoM due to intentional restrictions in the same metric that reveals reductions in FoM due to violence or environmental restrictions. This is an inherent risk in the centralized assessment of aggregated data, and it serves as reminder that absolute metrics devoid of context may be more harmful than helpful.

Freedom of Movement Can Exist Where Insurgents Have Control

It is also possible to receive positive indications of both perceptual and actual FoM for civilians who live in an area controlled by insurgents. Civilians living in a Taliban (or other group's) internal safe haven might be perfectly content with their ability to move to and from a market or a relative's home, and there may be very few actual restrictions on their ability to do so. In fact, road safety is one benefit that many Afghans believe the Taliban can provide and GIRoA cannot. Indeed, making the roads safe was the first thing the Taliban did in Kandahar in 1994 on its rise to power. But in this case, positive indicators of FoM (say, a poll and an imagery analysis of roadways in the area) actually indicate a lack of progress toward the objective of sustainable government legitimacy. If not correctly identified and analyzed, these results could be misleading. Some safe havens are not clearly identified as such or are controlled without overt presence. Therefore, it may not be easy to isolate areas of insurgent control in a holistic FoM assessment, and positive trend reports might hide negative conditions.

Summary of Analysis

FoM is a complex concept that has been poorly defined and insufficiently translated into practical guidance. Theater assessment staffs in Afghanistan have few resources to guide their conceptual planning or to help them collect and analyze information that might help them explain FoM to the ISAF commander or senior policymakers. However, despite this lack of clear guidance, both military and civilian leaders from the policymaker to the tactical operator level have identified a number of clear concepts and objectives for FoM in Afghanistan. They place a strong emphasis on improving FoM for civilians and reducing FoM for insurgents. These objectives are typically linked to the belief that FoM is a human right and a means for economic development and that improving FoM will improve the lives of Afghans to the point that they will not want to join or support the insurgency. Whether or not these assumptions are valid, they provide at least a framework for campaign assessment.

These assumptions and associated operations do not, however, provide a clear and direct connection between improved civilian FoM, reduced insurgent FoM, and campaign end-state (or terminating) criteria that might be assessed by a theater assessment staff. Nor do these assumptions reflect the complexities or inherent contradictions of FoM. There has been insufficient effort to determine how perception and actual FoM are linked, how they might be correlated for assessment, or how some of the other factors identified during the research for this report might affect FoM assessment:

- There are at least five categories of FoM, each of which may complement or confound the other.⁵⁵ These categories are distinct but not necessarily independent.
- Issues of scope and scale will make it difficult to collect information that accurately reflects FoM for civilians and insurgents across an entire theater; context matters.
- The fluidity of the COIN environment means that both the perception and reality of FoM can and will change often, quickly, and unexpectedly. Reporting will contain leading and lagging indicators and may not reflect ground truth by the time it is assessed.
- To assess FoM, it is necessary to measure both perception and reality, because perception might not match reality and reality might not match perception. Willingness to move, the ability to move, and actual movement might be considered as three separate variables or values in an assessment. It is possible to see actual movement coupled with a widespread perception that it is unsafe to move.
- The convergence of purposeful coalition reduction of FoM and reports of high levels of FoM in insurgent havens can play tricks on time-series assessments of FoM indicators. It would be conceivable for an insurgent-held or -influenced area with high levels of FoM to see a drop in FoM as coalition forces clear and stabilize the area, and then a subsequent increase in FoM after the operation.
- Civilian FoM is not always desirable; in some cases, it is necessary to restrict FoM (an important element of population control) while retaining the goal of improving overall FoM at the strategic level. Efforts to restrict FoM will shape reporting and assessments and must be carefully monitored.

⁵⁵ ISAF's Afghan Assessment Group could also determine that one or more of these categories should be eliminated or combined. For example, it may view the NGO category as extraneous. It is listed here because it is mentioned fairly frequently in the literature and it seems to affect COIN outcomes. Other categories not considered in this report might also be useful for operations and assessment.

- It is possible to have a high degree of civilian FoM in insurgent-held areas: Civilians can be happy with FoM in a way that does not support ISAF or Inteqal objectives. It is not easy—and in many cases not possible—to identify differences between civilians and insurgents for the purposes of FoM assessment.
- Increasing FoM for civilians may also increase FoM for insurgents and criminals: Improving infrastructure, reducing roadblocks, and taking other steps to improve civilian FoM may improve insurgent FoM because Afghan insurgents tend to blend in with the population.
- Efforts to gather more information can unduly burden subordinate commands, but a lack of data undermines centralized assessment. Finding an effective, structured approach to FoM assessment will require some cost-benefit analysis and a balance between context and aggregation, as well as a collaborative risk assessment with subordinate commands.

With these considerations in mind, some initial findings emerged from the analysis of the FoM concept that might assist ISAF in developing a comprehensive approach to FoM assessment. The linkage between what is perceived to be an adequate and sustainable level of civilian FoM and subsequent support from the government toward this end is tenuous at best. However, fostering FoM in government-controlled areas may influence Afghan civilians to support the government because increased FoM may give them faith in the ability of the security services to protect them from physical and economic harm. Assessing the relationship between the existence of FoM, indicators of popular satisfaction with FoM, and real, sustainable support for the government will require comprehensive and contextual analysis of a number of different variables.⁵⁶

This analysis of the FoM concept is intended to provide an overview of key issues and to frame possible best practices for assessment. Chapter Three examines past and current efforts to assess FoM, and Chapter Four provides recommendations derived from holistic analysis and analysis of practice.

⁵⁶ In such areas, insurgent presence is negligible, so competition between the insurgency and the government is not as relevant as in contested areas. In this case, the ability or lack of ability to provide services and secure movement is likely to more clearly correspond with government popularity. However, ascribing a clear correlation between any two variables in COIN is challenging even in areas of strong government control.

Analysis of Past and Current Theory and Practice

We've deemed freedom of movement almost too difficult to really measure.

—*Assessment analyst, Afghanistan, 2011*¹

The purpose of this chapter is to show what has been done to address FoM by counterinsurgents in historic cases, by a range of staffs in ISAF, and by third-party organizations in Afghanistan. The goal is to identify those efforts that worked or provided some insight and those that did not work. Because military and third-party assessments have considered some or many of the issues raised earlier in this report, this chapter necessarily revisits some of these points in the context of actual assessment. To examine past and current practice, we also explore the ways in which FoM has been incorporated into theater assessment, efforts to develop proxy metrics to assess FoM, survey structure for both official and third-party surveys designed to capture perception data on FoM, and ways in which unofficial or third-party reports have attempted to capture FoM for collection and analysis. All the efforts to capture and assess FoM were undertaken by staffs in the middle of an ongoing COIN campaign. Staff officers tasked with developing these approaches and tools often had very little to work with in terms of precedent or guidance, so they made do with what they had.

Historical Examples

To inform FoM assessment in Afghanistan, it is helpful to briefly look at historical examples that show how FoM was perceived in past COIN operations and assessments. From Iraq and Northern Ireland, it is clear that efforts to control movement—and thus restrict FoM for a time—were instrumental in reducing violence to a manageable level.² However, it is also clear from Iraq, and increasingly from Afghanistan, that once security reaches a manageable level, a return to “normal” life (or the establishment of a normal life) benefits typical COIN end-state objectives. The desire for normalcy was reflected in Iraqi Prime Minister Nouri al-Maliki’s demands that blast walls and other efforts to restrict movement in Baghdad be dismantled even before security was adequately controlled. Together, these observations demonstrate that FoM plays a role in both security (restricting it) and development and social activity (enhanc-

¹ Assessment analyst, email to the authors, February 16, 2011.

² Observations on Iraq are from Terrence Kelly based on his time as director of Baghdad Embassy’s Joint Strategic Planning and Assessment Office. Observations on Belfast are derived from interviews with British officers who served there (2006–2007).

ing it). This makes the assessment staff's job of defining and applying assessment methodologies difficult.

A Survey of Freedom of Movement in Foreign Counterinsurgency Cases

Historical examples of efforts to improve FoM for security and government forces in non-U.S. COIN operations are plentiful, and the literature shows that security-related FoM considerations were often integral to campaigns. Success for the British in Malaya was due in no small part to efforts to relocate and isolate large segments of the population from the insurgents, but it also depended in part on road construction projects that improved FoM for COIN forces.³ British and Thai forces replicated this effort during counterguerrilla operations along the Thai-Laotian border in the late 1960s.⁴ In these cases, road improvement gave the counterinsurgents greater FoM, which, in turn, allowed them to exert greater control over the hinterlands. This kind of mobility has proved particularly useful against rural insurgencies, which tend to depend on isolated base areas and internal sanctuaries during the early and middle stages of an insurgency. One would have to assume that these road improvements also increased FoM for civilians and insurgents, but most COIN operations present such trade-offs.

Tactics designed to restrict civilian FoM that might work in one campaign (e.g., Malaya) are not necessarily generalizable to another. Previous RAND research on insurgency endings has shown that each COIN campaign requires tailored operations not only to match available resources but also to address the particular root causes of the conflict.⁵ While the ethnic Chinese Malay population accepted the British relocation and isolation strategy, the ethnic Mizo population in northeast India reacted negatively to Indian Army efforts to resettle the population and restrict its FoM to undermine an ethnic Mizo insurgency. This relocation, handled with far less aplomb than the British relocation of the Malay, “reinforced [the insurgent] narrative about India’s desire to destroy the Mizo way of life, allowed the insurgents and their sympathizers to accuse India of human rights atrocities, and harmed the ability of the Indian security forces to gather useful intelligence about the insurgency from an alienated and resentful population.”⁶

In many cases, counterinsurgents implemented some sort of barrier system to restrict FoM, either for civilians with the intent of separating them from the insurgents or, specifically, to channelize or prevent insurgent movement. The Moroccan Royal Armed Forces faced difficulty in reducing the FoM of Polisario insurgents across the western Sahara desert in the late 1970s. Instead of attempting to exert control through force, the military built a series of large walls that “significantly blunted Polisario’s guerrilla and mobile-conventional operations because insurgent units seeking to circumvent or attack them were relatively easy to detect in the open terrain.”⁷ An examination of 14 insurgency cases in which physical barriers were employed showed that the use of barriers by counterinsurgents correlated equally with government victory and defeat.⁸

³ Clutterbuck, 1977, pp. 52–53.

⁴ Clutterbuck, 1977, pp. 55–57.

⁵ Connable and Libicki, 2010, pp. 151–156.

⁶ Chadha, 2009, p. 39.

⁷ O’Neill, 1990, p. 133.

⁸ Connable and Libicki, 2010, p. 184.

A detailed case-study approach to FoM might reveal a dedicated and comprehensive effort to draw a link between increasing civilian FoM and COIN strategic end states in these non-U.S. cases, and it might also reveal efforts to assess FoM within a campaign assessment framework. However, an examination of commonly referenced COIN material did not reveal either type of effort in the cases mentioned here or in others, such as the Peruvian campaign against the Shining Path, British campaigns against the Irish Republican Army, French campaigns against the Algerian insurgency, Soviet and Cuban campaigns against Angolan insurgents, or the Egyptian campaign against Yemeni royalists.

Freedom of Movement in Vietnam

During the Vietnam War, the United States and its South Vietnamese (Government of Vietnam, or GVN) allies and the North Vietnamese valued FoM in ways that shaped their respective strategies. U.S. attrition strategy in Vietnam depended in great part on the ability to reduce the movement of insurgent personnel and supplies from the north to the south. Bombing campaigns were specifically tailored to target movement routes, mar shalling areas, rail yards, and other transportation hubs in North Vietnam and neighboring countries. These attacks were assessed in a number of formats, including top-level official reports by the commanding general of U.S. Military Assistance Command, Vietnam. One such report stated that U.S. Air Force objectives in Vietnam included the limitation of FoM for the enemy and listed the amount of firepower used in these various missions.⁹ Assessment of U.S. efforts to restrict insurgent or conventional military movement was typically carried out with these types of input metrics or by monitoring estimates of destroyed enemy vehicles. Other assessment efforts relied on estimates of enemy movement or area control. For example, a U.S. Embassy cable on campaign assessment stated that one of the signs of success in the war was the reduction in the miles of roadway controlled by the enemy.¹⁰

U.S. and GVN strategy also relied on the ability to move from place to place as an enabling condition or objective. Assessment reports described improvements to transportation networks and increased FoM. For example, according to one report,

During July, 540 feet of new bridging were complete while 1,350 feet were repaired or upgraded. During July, 132 kilometers of highway were repaired which facilitates the movement of military and civil traffic. In addition to road improvements, emphasis is continuing on expanding and improving air transport.¹¹

Some assessment reports detailed which routes were open, closed, or restricted across the country.¹² These reports were detailed and extensive, but they often failed to explain why any one route was more or less important to U.S. operations or strategy. Figure 3.1 shows the Vietnamese National Railway System in South Vietnam in 1967, including rail lines that were open, scheduled to be restored, or inoperative and not scheduled for restoration. The map is an example of a typical FoM assessment product during the Vietnam War.

⁹ Westmoreland, 1967b, pp. 14–15.

¹⁰ U.S. Embassy, Saigon, Vietnam, 1967. How this was measured is unclear. In all likelihood, the number represented a vaguely substantiated estimate.

¹¹ U.S. Military Assistance Command, Vietnam, 1967, pp. 2–3.

¹² Westmoreland, 1967b, p. 12.

Figure 3.1
Assessment of South Vietnam's Railway System



SOURCE: Thayer, 1975b, p. 8.

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U.S. assessment analysis also focused on dissecting Viet Cong efforts to restrict U.S., GVN, and civilian FoM in South Vietnam. A series of reports by the Office of the Secretary of Defense, published in the 12-part anthology *A Systems Analysis View of the Vietnam War*, capture the most concerted assessment efforts during the latter stages of the conflict. Volume 5 of the collection contains a detailed assessment of U.S. air operations, including anticipated effects on enemy FoM. One report in Volume 10 addresses Viet Cong efforts to interdict traffic along Route 4 in the southernmost sector in South Vietnam. It also describes the economic significance of the route to the GVN and to the COIN campaign. For example, it notes, “The bulk of foodstuffs produced in the [Mekong] Delta are shipped to Saigon by this highway.” The report determined that FoM along this route was critical to the success of the campaign, at least in terms of interim objectives. It then presents an analysis of captured Viet Cong documents showing the intent to interdict the route and correlates these documents with an analysis of attack incidents along the route over a specific period.¹³

¹³ See, e.g., Thayer, 1975a, 1975b.

General Vo Nguyen Giap, commander in chief of the Army of the Democratic Republic of Vietnam, described the North Vietnamese strategy against France and later against the United States as “mobile war.”¹⁴ Mirroring other communist guerrilla warfare doctrine, General Giap made it clear that FoM was a critical requirement for the success of his operations in the early and middle stages of the war. This requirement is reflected in captured documents that showed a tactical emphasis on FoM. The North Vietnamese army also emphasized FoM as a basic human right, particularly after the 1973 peace agreement with the United States and GVN. The Paris Peace Accords that were intended to end the war codified FoM as a “democratic liberty of the people.”¹⁵ The North Vietnamese attempted to take advantage of the accord to undermine the legitimacy of the GVN and possibly to improve FoM for the remnants of the guerrilla forces operating in the south. One radio propaganda message stated that “this administration has prohibited all democratic liberties as provided for by the agreement, such as freedom of movement.”¹⁶

Most U.S. assessment of FoM in Vietnam seems to have focused on operational mobility for friendly and enemy forces. There have been few efforts to link civilian FoM to strategic end-state objectives or to identify FoM as a basic human right. As pacification programs accelerated in the late 1960s, so did analysis of civilian FoM. However, these analyses were often conducted at the tactical level and typically were not incorporated into holistic theater assessment in any meaningful way.

Freedom of Movement in Afghanistan Theater Assessment Frameworks

ISAF and IJC have made several efforts to incorporate FoM into assessments in Afghanistan. For example, IJC has written an order describing FoM and FoM assessment, and the ISAF Freedom of Movement Working Group developed a spreadsheet of metrics designed to capture FoM information.¹⁷ The Center for Army Analysis conducted a review of FoM assessment methods, and the district assessment process at IJC accounts for both civilian FoM and insurgent FoM.¹⁸ The District Assessment Framework required subordinate RCs to provide input to address the requirement to “improve freedom of movement in order to increase commercial activity.”¹⁹ RC East also created an assessment management tool (the District Stability Assessment Tool) to shape the command’s assessments, and it required personnel to provide information on civilian FoM for economic measures as well as information on insurgent FoM. Early iterations of IJC district assessment efforts did not necessarily provide a clear understanding of what FoM was or why data should be collected to address and explain it. Throughout 2010, the various efforts to assess FoM in Afghanistan at the ISAF, IJC, and RC levels were ad hoc in that they were developed without specific doctrinal or command guidance.²⁰

¹⁴ Giap, 1961/2001, especially p. 49.

¹⁵ Paris Peace Accords, 1973, Article 11.

¹⁶ Democratic Republic of Vietnam, 1973b, p. K14. This message was replicated in a number of other recorded broadcasts in 1973.

¹⁷ Further details are included in the classified annex to this report.

¹⁸ ISAF Joint Command, 2010a.

¹⁹ ISAF Regional Command East, 2010.

²⁰ The Measuring Progress in Conflict Environments protocol developed by the United States Institute of Peace includes some FoM indicators, but they are not explained in detail and they address a relatively narrow aspect of FoM (violence between identity groups). See Dziedzic, Sotirin, and Agoglia, 2008, p. 26.

The ad hoc nature of the FoM definitions, collection requirements, and assessment methods meant that RCs had considerable leeway to design and implement their own FoM collection and reporting processes. In the case of district assessments, they were instructed to assess FoM in a single category. In some ways, this approach was beneficial: At the very least, it improved the context of the reporting provided to IJC and then ISAF. However, it also made it more difficult for assessment staffs in Kabul to determine what FoM reporting actually indicated from area to area. The dependence on ad hoc and generalized definitions produced by various staffs in Afghanistan meant that different units down to the battalion level could interpret FoM differently. Because there was no clear understanding of what FoM meant or why it was critical to strategic success, there were probably varying levels of effort and resources dedicated to FoM collection from unit to unit.

The remainder of this chapter addresses some of these efforts, beginning with an examination of the ways in which staffs have attempted to collect data to feed both physical and perception assessment.

Technical and Manual Collection of Physical Movement Data

Technical collection efforts are designed to capture information that can be observed, while perception collection efforts capture information that must be reported voluntarily.²¹ Technical collection might be used to determine either actual or perception aspects of FoM. In practice, technical collection is often used to simply describe “freedom of movement” in a way that would seem to encompass both perception and actual FoM. This section refers to the collection efforts of a specific RC staff.²² In 2010, this staff developed a set of technical collection processes for internal use to determine FoM in its area of operations using the following techniques:

- analysis of overhead imagery from 2002 and 2010 to identify population centers that were expanding and thus were believed to be thriving economically
- analysis of the same imagery to count the number of car dealerships in the RC’s area of operations, coupled with atmospherics reporting from the dealers to determine the sales climate—the better the sales, the better the FoM for civilians
- “clicker counts” of cars that passed ISAF checkpoints using any of a variety of available counting devices to show rate of traffic, means of travel (and types of vehicles), and times of travel; the staff also counted parked cars through various means for the same purpose.

These efforts produced some useful contextual analysis for the RC, but there are strengths and limitations inherent in each of these techniques. Imagery analysis showing the growth of population centers might indicate that civilians are free to move about, but this is, at best, a proxy metric in the absence of actual population and economic indicators. While it seems logical that population growth requires FoM, it is not clear that these two variables (popula-

²¹ In this context the term *technical* is not intended to be conflated with an intelligence collection methodology definition for technical intelligence collection, or TECHINT. Instead it is intended as a broad descriptor.

²² Information for this section was obtained from a January 2011 interview of a military officer who had served on an RC staff in Afghanistan.

tion growth and FoM) are correlated in a way that is generalizable, or that they are sufficiently linked for the purposes of theater assessment. Counting car dealers is another imaginative proxy metric, and it also seems logical that more car dealers means more movement.

At best, though, these approaches show that there is some or “more” movement for an undisclosed group: Insurgents, criminals, and corrupt officials are often involved in automobile imports and sales. While more car purchases may reflect confidence in the economy and in the ability to move, it cannot be assumed to be an unvarnished “good” in terms of assessment and campaign end state. Economically disadvantaged Afghans may not have the ability to purchase a car, so car sales may not tell the assessment staff much about the largest segment of the population (or may tell only a little bit about one or two segments). A great deal of additional contextual detail would be needed to show that more car sales were, in fact, an indicator of increased FoM. However, depending on how FoM is defined and how assessment of FoM is framed, a staff could simply construe more economic activity as a proxy metric for greater civilian FoM. From this point, the staff might extrapolate the increase in economic activity to show that it indicates an increase in government legitimacy and a reduction in antigovernment motivations. This appears to be the process undertaken by this particular RC staff. The use of proxy metrics and the extrapolation of COIN data are commonplace in assessment, but these techniques carry clear risk in terms of establishing validity.

Traffic Volume Collection, Reporting, and Assessment

Research for this report uncovered one effort by an RC staff to conduct a traffic volume analysis using “clicker counts” of passing traffic; other attempts may have been made elsewhere. Traffic volume studies or clicker counts are common practice around the world. Taking clicker counts of passing cars is perhaps the most methodical and persistent way to capture physical movement, but it is fraught with complications. Counting passing vehicles along a specific route can show how many vehicles are moving over that route during the period of collection, and samples might be extrapolated for broader interpretation. In general, it would not be safe to say that more vehicles moving over any given route over time is a clear indication of increased FoM for any group, or of increased support for GIRoA.

There are a number of available technical means to capture the physical movement of vehicles or people. These devices are in common use in urban and rural areas around the world, and counting equipment can be quite refined and sophisticated. Some cutting-edge computer-aided equipment can both count vehicles and automatically differentiate between vehicle types, but most systems only identify vehicles as single units or by axle count. Most automated systems require the physical recovery of data from the device. All click-counting hardware and software is commercially available, off-the-shelf, and could be easily obtained by ISAF or a subordinate command.

A survey of available commercial counting devices revealed five different categories of counters. Research for this report did not include a hands-on examination of these devices, so it is not possible to rate the efficacy of any one device over another in field conditions in Afghanistan. The five categories of devices are as follows:²³

²³ See Advanced Traffic Analysis Center, 2002, and D. Smith, 2002, for additional information on devices and their efficacy, as well as detailed descriptions of traffic volume collection techniques.

1. Inductive burial loop counters: Two boxes are connected by a linear magnetic detector to count vehicle volume; battery-powered; can be built in under poured concrete or asphalt; tamper-resistant counter.
2. Radar-based counters: A single, small sensor uses reflected energy to count vehicle volume; approximate 25- to 30-foot range; most models require continuous power; tamper-resistant counter.
3. Pressure hose counters: A counter box and data-logging box are connected to a pneumatic hose that counts axles; battery-powered; surface-laid; tamper-resistant counter.
4. Passive infrared sensors: Units consist of a sensor and receiver; inexpensive, but not as durable as other counters; 50-foot range or shorter fan-shaped range; battery-powered.
5. Hand-held counters: Single device, either mechanical or battery-powered, requires human input; some versions are weather-resistant and durable.

At least in the U.S. government, traffic volume analysis typically relies on four complementary types of data collection: limited continuous counts, control or seasonal counts, extensive coverage counts, and flexible special needs counts.²⁴ Continuous counts are 24-hour collection efforts that require the placement of persistent, weather-resistant counting devices, such as an inductive burial loop counter. The number of these continuous efforts is probably limited by cost and maintenance concerns. Control or seasonal counts are taken periodically to help account for seasonal traffic pattern changes in annual data sets, or to improve the accuracy of annual counts. Coverage counts are short in duration, from 24 hours to one week, and help assess areas not covered by continuous count collection points. Flexible special needs counts are designed to address specific requirements from agencies other than transportation departments. For the purposes of Afghanistan FoM assessment, probably only the first three types of counts are relevant.

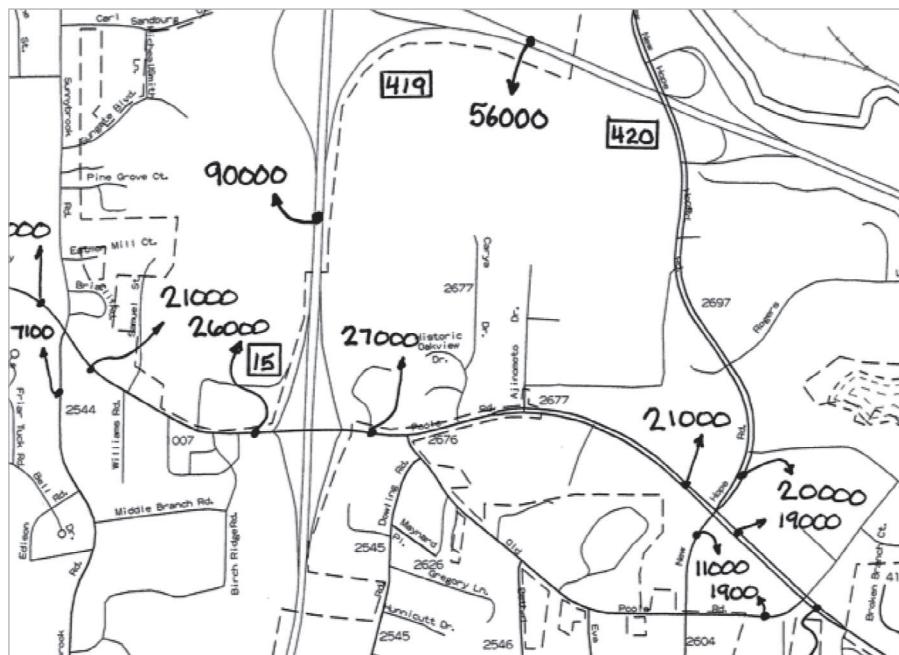
These counts produce data that can then be superimposed on mapping or imagery products. Figure 3.2 is an example taken from a North Carolina Department of Transportation study of road traffic in Raleigh in 2009. It shows the estimated annual counts at specific points along designated route sections.

Technical collection of data on traffic patterns requires not only forethought but also planning and structured design. The Federal Highway Administration's *Traffic Volume Guide* (2001) and *Highway Performance Monitoring System Field Manual* (2010) provide clear and specific instructions that a military staff could use to construct a traffic volume measurement process for Afghanistan. Some technical and procedural expertise may be required to implement a successful program: Traffic volume analysis entails physical collection as well as scientific design and analysis. If ISAF implements a traffic volume program for FoM, staffs should not necessarily compare the data with or rely on recommendations derived from studies of U.S. traffic patterns in their assessment of Afghan traffic patterns. For example, the recommended monitoring periods and the degree of error percentage between periodic and annual traffic counts in the United States may not reflect similar conditions in Afghanistan.²⁵

²⁴ Federal Highway Administration, 2001, p. 3-6.

²⁵ See Federal Highway Administration, 2001, pp. 3-10–3-11.

Figure 3.2 Example of a Traffic Volume Mapping Product



SOURCE: North Carolina Department of Transportation, 2009.

NOTE: The numbers and arrows indicate average annual traffic as recorded by automated click-counting devices.

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Counts can still be useful for specific contextual assessment, but they are limited in some ways:

- Barring the hiring of Afghan contractors to conduct clicker counts or retrieve data, counts can only cover areas where there is at least periodic ISAF (or ANSF) presence. Yet civilians, insurgents, NGOs, and even GIRoA officials might avoid routes that pass by ISAF bases or checkpoints. Alternatively, in some cases, civilians might prefer to travel on roads covered by ISAF or ANSF, a behavior that would also skew collection.
- It is not clear that a sufficient sample size could be obtained to deliver meaningful results as long as the security situation is unstable.
- It is impossible to know who is in the passing vehicles, why they are moving, where they are coming from, or where they are going. They could be moving goods to market or bypassing other routes that have been cut off by insurgent checkpoints or road craters. More movement on one route might (or might not) indicate less movement on other routes.
- This technique tends to focus on movement between areas and not necessarily movement within areas; each count is contextual to the location of the base or patrol base and might mean something different in a different context. Counts of traffic along a major highway would differ from those on a busy local dirt road where the same people move back and forth several times in one day. Technical means could be used to count intravillage movement if resources were available.

- Counts would have to be carefully tied to other indicators, including seasonal indicators (e.g., there might be more movement at harvest time and less in winter).²⁶
- Any device not under constant observation by ISAF or ANSF might also present insurgents with an opportunity to transform the device into an IED detonator.²⁷
- Local Afghans are likely to notice the emplacement of sensors and may avoid them because they do not know what they are (thereby throwing off the movement count), take them to sell on the market or deliver to insurgents, or tamper with them out of curiosity in a way that might damage or destroy the sensors.

With appropriate software, cameras could also be used to observe roadways and count vehicles. Some cameras are in use in Afghanistan, but coverage is limited, and the manpower requirements to track and analyze camera feeds can be significant. The viability of electro-optical collection would have to be determined by the ISAF staff. Electronic click-counting would have the same limitations for assessment as manual click-counting (e.g., barriers to coverage).

Perhaps the greatest limitation in traffic volume counts is the degree to which volatility in Afghanistan due to the security situation and internal population displacement affects the ability to extrapolate coverage counts to larger areas or over time. Annual counts for specific areas are typically determined by applying formulas that extrapolate periodic counts in a given location. In the example depicted in Figure 3.2, it is probably reasonable to extrapolate annual movement patterns from periodic point counts because movement patterns probably shift gradually in U.S. urban areas (even accounting for road closures due to construction). Security is effective and stable in Raleigh, North Carolina, compared with Kabul, Asadabad, or Sangin, Afghanistan, and the population of Raleigh is not likely to rapidly change movement patterns or be displaced unexpectedly as might be the case in many areas across Afghanistan. It would be logical to assume that accurate extrapolation of traffic volume data requires at least some predictable degree of stability in the area in question. That kind of predictable stability cannot always be safely assumed in Afghanistan.

Once collected, traffic volume data might be used to represent actual movement, sometimes used as a proxy for FoM. This was true in one reported assessment effort and might be true in others. This approach does not take into consideration the fact that most traffic counts are estimates. A broader range of assessment efforts identified in the research for this report have sought to find and present a meaningful correlation between actual movement and support for GIRoA. Continuous counts that use persistent point collection might be the most effective means of determining traffic patterns, but assessment staffs should remember that these counts cannot necessarily be extrapolated to surrounding areas or adjacent roadways. Perhaps more importantly, assessment staffs should be aware that more or less actual movement along specific routes is not necessarily indicative of more or less FoM or more or less support for GIRoA.

²⁶ This approach of counting cars also defines civilian FoM narrowly—some people walk or use donkeys, horse-drawn carts, bicycles, and other conveyances to travel.

²⁷ Locals who are intent on selling such equipment might also simply steal the devices (interview with a military officer, January 2011).

Global Positioning System Tracking of Movement

It is possible to capture ISAF movement through the use of existing Global Positioning System (GPS) devices (e.g., Blue Force Tracker) mounted on coalition vehicles, at least when these devices are functional. Readings from GPS units are already used to analyze movement at various movement-control centers across the theater, and some of this information could be useful to assessment analysts. The best use for this information would be to identify physical or security choke points for further analysis.²⁸ It might also be possible to affix a certain number of civilian vehicles with GPS devices to achieve a similar effect, but cost and other issues (e.g., willingness of civilians or officials to be tracked) might restrict collection to a certain extent. Tracking civilian movement with GPS devices might also be useful in identifying insurgent or criminal checkpoints and related physical choke points and in supporting movement-control analysis in addition to campaign assessment. Such efforts could be tried with ANSF and GIRoA vehicles. Any technical analysis of movement through GPS devices would be route- and time-specific, and it would feed rather than shape FoM assessment.²⁹

Manual Collection: Impact on Tactical Units

Centralized requirements to collect movement data for FoM assessment will eventually reach tactical units operating in rural farming or mountainous areas in Afghanistan. These units sometimes travel many hours or entire days to reach remote villages in their tactical areas of responsibility. Even local patrols to nearby villages require extensive planning and often carry great risk for those involved. Collection requirements that demand some kind of presence outside of a combat outpost or patrol base over time will increase the burden and risk for these units. For example, an infantry platoon tasked with counting the number of people moving into and out of a market on a particular day using handheld click counters will have to conduct a combat patrol to capture that information. In addition to exposing themselves to risk, these personnel will be trading a different mission—perhaps engagement with local leaders or a security patrol—for the collection mission. While a unit can perform more than a single task per patrol, physical data collection requires some form of trade-off at the tactical level. Furthermore, since patrols are not, by definition, persistent, they are less suited than technical collection means to capturing large quantities of data using methods that require consistent collection over predictable periods. These costs and risks also apply to the collection of data from fixed traffic volume collection devices. Centralized FoM metrics and collection requirements should be chosen carefully with these potential consequences in mind.

Infrastructure Analysis for Assessment

Infrastructure analysis would seem to be of particular interest for FoM assessment in Afghanistan because of the extensive funding and operational effort that ISAF and various government agencies (particularly USAID) have put into the development of Afghanistan's road, rail, and air infrastructure. Theater-level assessment should inform policy decisionmaking, and policy-makers have shown a particular interest in the cost-effectiveness and benefits of infrastructure development. Technical and manual collection could be most effective in determining the quality and availability of paths, roads, bridges, tunnels, and other types of infrastructure

²⁸ GPS shows points of location over time, so it is possible to identify possible choke points by analyzing GPS data. Further contextual analysis might be required to separate choke points from mundane features, such as truck stops.

²⁹ It also might be possible to use ground moving target indicator data to track movement patterns.

required to facilitate (or restrict) free movement. Imagery analysis, photographic collection, and other overhead collection methods are currently used to examine infrastructure for operational analysis. Past examples of these analyses include the study of rail capacity in South Vietnam (see Figure 3.1) and intelligence imagery analysis products, such as route studies, riverine studies, bridge studies, and even such detailed analysis as culvert studies for major roadways. In the military, most of these products are classified, but they are readily available to assessment staffs and are typically releasable to coalition partners. Figure 3.3 is an example of a photographic product that provides at least a general idea of road conditions, traffic capacity, and traffic volume at a specific point in time on a particular route (the Khowst-Gardez Pass), as well as a potential choke point.

Imagery products are often matched up with route reports from infantry or logistics units, as well as with development reports from NGOs or aid organizations. These reports would be most effective when matched with perception data on infrastructure and with traffic counts over time along specific routes.

Figure 3.3
Overhead Photographic Image of Khowst-Gardez Pass, Afghanistan



SOURCE: Baker, 2009.

RAND TR1014-3.3

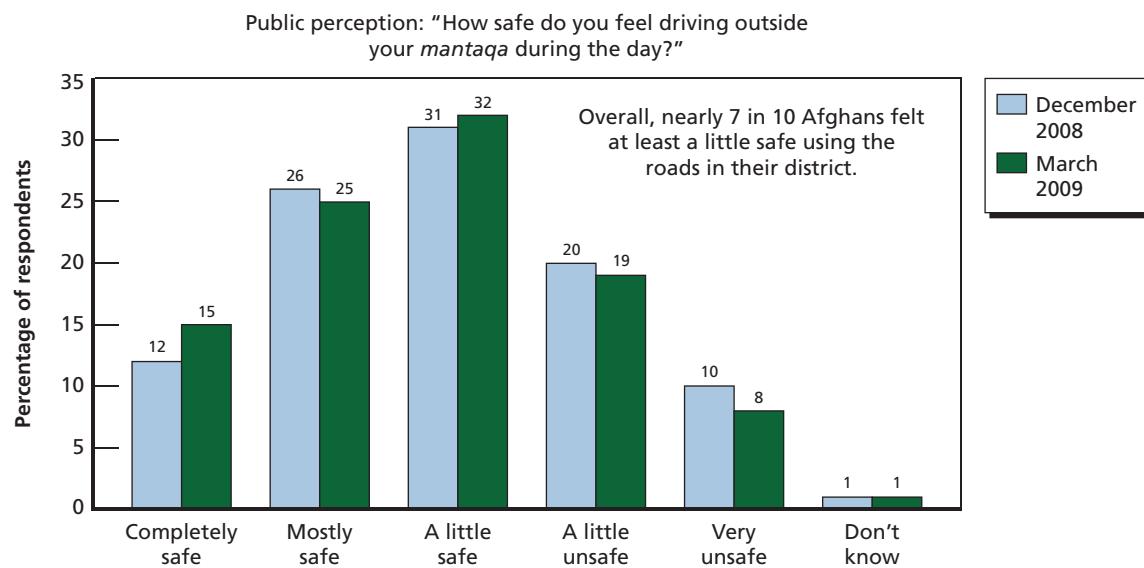
Perception Indicators: Polling, Surveys, and Other Collection

This section addresses efforts to collect and assess perception data for FoM. Assessment staffs attempt to acquire timely and accurate data on perception of FoM to support holistic theater analysis. The primary means of assessing perceptual FoM is through polls and surveys, but this section describes other, more context-sensitive methods of collection that might assist FoM assessment.

ISAF, IJC, and other organizations have produced some consistent polling information on FoM perceptions over the past several years. The ISAF-sponsored Afghanistan National

Quarterly Assessment Report (ANQAR) poll asks respondents a series of questions meant to assess FoM, including ones that seek to gauge people's willingness to use the Ring Road, perceptions of safety on roads in their districts, perceptions of safety on roads outside their districts, perceptions of the safety of their children going to school, and satisfaction with services, specifically the quality of roads. The results of this survey were included in a Center for Army Analysis study of the FoM assessment process. Figure 3.4 is an example of a survey result drawn from the March 2009 ANQAR survey. The figure shows how this information has been presented in assessment briefings in the past.

Figure 3.4
Survey Results from ANQAR Poll on Freedom of Movement



SOURCE: ISAF Headquarters Strategic Advisory Group, 2009, p. 17.

NOTE: *Mantaqa* = area, village, or district (generally).

RAND TR1014-3.4

Afghan Center for Socio-Economic and Opinion Research Polls

Polls conducted by the Afghan Center for Socio-Economic and Opinion Research asked respondents to assess the condition and availability of roads, bridges, and other infrastructure and to describe their personal level of FoM ("the ability to go where you wish safely").³⁰ These and other polls ask important questions that help get at the issue of civilian FoM for assessment purposes and, taken together, can begin to provide a broad overview of some of the FoM challenges across Afghanistan. However, these questions are not necessarily sufficient to address the issues raised earlier in this report. For example, they do not necessarily capture the perception of economic costs associated with rerouted travel. There is no clear, stated connection between these polling questions and ISAF objectives, and countrywide polling data do not present sufficient context to help assessment staffs understand what is happening in specific districts or provinces. Fortunately, most of these polls provide provincial data, along with district-by-district data. This is more helpful, and these data can be matched up with infra-

³⁰ Afghan Center for Socio-Economic and Opinion Research, 2010, pp. 5–6.

structure reports, movement reports, and other information to enable some kind of contextual assessment. However, when aggregated, the context of these local data sets is lost.

Other Collection Methods and Sources for Perception Data

Polls and surveys alone are not sufficient to provide a well-rounded understanding of civilian FoM perception from area to area. Other collection methods are equally or more important. For example, various intelligence collection methods can be used to ascertain perception of FoM among specific populations. Infantry patrols can and often do ask questions of urban civilians and rural villagers about their perceptions of FoM, but these reports do not always find their way from the tactical to the theater level for analysis or assessment. There is a great deal of useful information on perception collected at the tactical and operational levels by not only military units but also Provincial Reconstruction Team members, NGOs, and GIRoA and ANSF officials. The degree to which this information is captured varies dramatically from area to area and over time, and there is no comprehensive system in place to capture and assess it at the center. Leveraging a comprehensive system to capture this information, though, might place undue burden on subordinate units. This trade-off is typical of all centralized analysis for assessment.

Some amount of structured collection is necessary to capture countrywide perception information for centralized assessment. The best kind of data are local and contextualized, so the more granular the poll, survey, or collection method, the better. However, as these data are aggregated, they lose context, and it becomes more difficult to compare aggregated perception data with other types of FoM information. As with technical and manual collection, requirements for survey or other face-to-face information collection should be carefully considered for the impact they might have on subordinate units.³¹

It may also be possible to collect FoM perception information from GIRoA officials, NGOs, and even insurgents. Officials can be contacted and polled through official channels, and ISAF counterparts can engage with them to get direct feedback. NGOs can be similarly engaged, and because some NGOs depend on ISAF or ANSF security for their FoM, they may be more than willing to provide information.³² Insurgent perceptions of FoM can be gathered through interrogation reports or other intelligence collection methods. Some of this information is probably being collected already; capturing it for assessment may only require identifying sources and transferring data.

Considerations for the Use of Perception Data in Assessment

Polling is probably the best way to determine perceptions of civilian FoM, but it is not fool-proof and should not be used without consideration and caveat. Vincent, Eles, and Vasiliev present a number of serious concerns regarding the ability to build random-sample polls in Afghanistan. These concerns include the lack of a recent, accurate national census (the last one was in 1979); the lack of sample frames for households, villages, and phone numbers; the lack of village-level population estimates; the lack of an accurate list of populated places and standard village names; issues with interviewer safety and access; and cultural friction that might reduce interview effectiveness (e.g., sex of the interviewer and interviewee, permission of local

³¹ It should also be noted that the types of questions asked in surveys and in face-to-face collection activities can themselves shape perception and behavior in unforeseen ways.

³² This may or may not be occurring already.

leaders).³³ However, they argue that it is possible to overcome these obstacles and build useful random samples for polling.

While it may be possible to build useful polls for certain areas, the security situation in Afghanistan will preclude interviewers from entering some of the most dangerous—and thus perhaps most important—areas. Some polling groups do have access to these areas, but it is not clear what accommodations they have to make to gain this access. A common complaint with polling is that Afghans are likely to try to deceive interviewers in an effort to shape coalition behavior, or simply out of fear. Polling agencies tend to deny that this is an endemic problem, and there are statistical methods to reduce the variance caused by deceit.³⁴ However, it is not clear to what degree these techniques ensure the accuracy of polls in Afghanistan or how widely they are used. Some assessment officers do not believe that individual interviewers are actually conducting hundreds of (approximately) 30-minute polls in very remote and often dangerous places over the course of an average collection period (about two to three weeks).³⁵ There is some concern that interviewers are filling in the data themselves rather than conducting dangerous and onerous interviews. While there are data analysis methods designed to identify the patterns likely to emerge from interviewer falsification, these methods are not foolproof, and they do not necessarily account for the savvy and ingenuity of the interviewers. Sometimes, falsification is not discovered until well after the data have been assimilated into a campaign assessment.³⁶ Finally, polling data only reflect opinion at a specific point in time, and opinion in COIN environments is subject to rapid change. Time-series analysis can provide some insight into changes in opinion over time (e.g., interrupted time-series analysis on a year-to-year basis), but these analyses are historical rather than current or predictive.

If polls are used to determine perceptions of FoM, then it would make sense to attempt to correlate polling data with other information, such as atmospherics or patrol reporting. At the very least, polling data should be presented with clear caveats, and assessment reports should be transparent in that they allow consumers to see how polls were constructed, executed, and analyzed.

Proxy Metrics for Freedom of Movement

Directly measuring FoM has proven to be difficult because FoM is hard to define and is often undetectable without excellent access to information and a balance of perception and physical data. Therefore, many units and assessment groups have resorted to the use of proxy metrics to assess FoM. In theory, a good proxy metric is an indicator that provides insight into the desired metric or variable (in this case, FoM) indirectly. For example, one senior U.S. military

³³ Vincent, Eles, and Vasiliev, 2010.

³⁴ See, e.g., Farber, 1963. Methods have improved significantly since this article was published, but Farber provides a good explanation of the problem and possible solutions.

³⁵ These opinions were expressed to the authors during informal conversations over the course of 18 months of interaction with assessment staffs during research for this and other RAND studies.

³⁶ For example, Spagat (2010, p. 18), points to possible data fabrication in the Lancet II study of Iraq mortality published in 2006. He was not able to complete his analysis of the Lancet II study until March 14, 2008. Data analysis alone might take less time, but it is not clear that these analyses are always conducted for polls in Afghanistan or that they are always released in a time frame that would reinforce or repudiate the polls prior to their assimilation into theater assessment products.

officer with experience in RC East relied on the number of shops opening in local markets to determine the ability and willingness of people to move.³⁷ Because markets are usually located in district centers or near other natural hubs, people must travel from isolated areas to reach them. A similar proxy metric for FoM of GIRQA officials (and possibly civilians more generally) could be the frequency with which officials show up for work. This could be a useful proxy metric that reflects the ability and willingness to move from one's residence to one's workplace, but people might move even if they are afraid to do so. The most commonly used proxy metric is attack reporting along routes of travel.

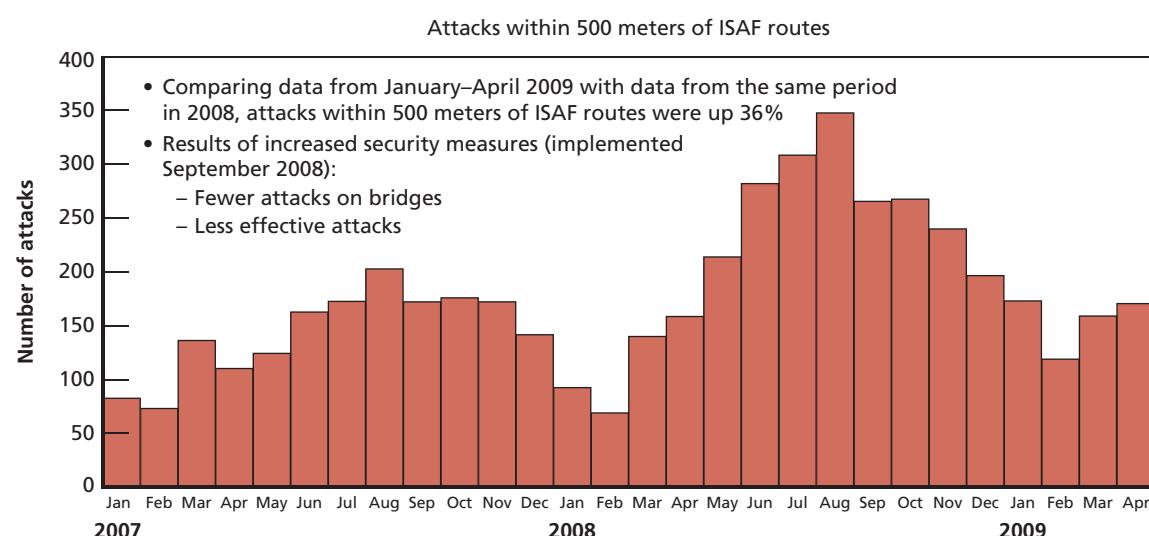
Attack Proxy Metrics

The attack report proxy examines the number and frequency of attacks conducted along various routes, usually within several hundred meters of a main thoroughfare. It purports to show the danger to civilians, ISAF personnel, GIRQA officials, and NGO staff traveling along this route and it also hints at delays in travel caused by attacks (cordon, forensics, etc.). Figure 3.5 depicts an attack proxy metric chart designed to compare physical FoM with perception information.

Attack report proxy metrics might be a “best-available” solution when direct measurement and other proxies are too difficult to implement. However, unless very carefully selected and tested, proxy metrics can be broad and inaccurate indicators. Before they can be trusted, it is important to establish their relationship to the situation one seeks to assess. The attack proxy approach, in particular, presents a number of concerns in this regard:

- Terrain shapes reporting to the point that attacks themselves may not affect the route in question. In a condensed urban or urban ring area, an attack 100 meters from a main

Figure 3.5
Attack Incident Reports over Time for Freedom of Movement Assessment



SOURCE: NATO Joint Operations/Intelligence Information System data in ISAF Headquarters Strategic Advisory Group, 2009, p. 17.

RAND TR1014-3.5

³⁷ Interview with senior U.S. military officer, January 2011, Washington, D.C.

road could be several streets away and might not affect traffic on the main road. In rural terrain, an attack 500 meters off the road, especially near a significant feature, such as a hill, might have no impact on movement along a roadway on the other side of the feature. Furthermore, GPS coordinates of attacks are not always accurate, particularly when convoys press through attacks. These reports become less accurate as Afghan National Army units increasingly operate unpartnered.

- Attack reports only address routes frequented by ISAF or ANSF traffic and not alternate routes that might be preferred by civilians attempting to avoid areas of likely violence. There will be more correlation in areas with limited road networks (e.g., mountain passes) and less correlation in areas with multiple routes (e.g., rural farming, urban and urban ring areas).
- Separate research on assessment conducted between November 2009 and February 2011 shows that attack report databases contain a large but unknown number of reporting, recording, or indexing errors. Inaccuracies and gaps in attack data—and in other data sets that might be used as proxy metrics—further undermine the value of these data as proxy indicators for FoM.
- While an attack against ISAF or ANSF personnel might indicate that a route is less trafficable for security forces, it is not clear that the occurrence of an attack can be equated with more or less perceptual or actual FoM for civilians. In many cases, civilians are quite comfortable transiting routes that undergo insurgent attacks because, among other reasons, the insurgents assure them that they will only attack military targets, the civilians are associated with the insurgents and feel safe from attack, or the civilians make a cost-benefit analysis and determine that the need to travel outweighs the risk of attack.

All centralized assessment metrics are proxy metrics with varying degrees of accuracy and utility. Because FoM cannot be *precisely* defined or quantified, all quantitative and qualitative metrics are proxy metrics for strategic objectives, and each has varying degrees of utility for assessment.³⁸ Any report containing quantifiable metrics should clearly explain how the metric was used, why it was used, and what it might or might not show. Efforts to conduct statistical correlation analysis of any two variables in the absence of a clear definition of FoM should be carefully explained in reporting.

Civilian and Third-Party Efforts to Assess Freedom of Movement

Several non-ISAF organizations have attempted to assess FoM in Afghanistan. Two sources are of particular interest: USAID's *Roads Socio-Economic Impact Assessment* (2008) and the Cooperation for Peace and Unity's (CPAU's) Human Security Indicators Project reports on Kunduz and Nangarhar provinces (2010a, 2010b). These organizations have assessed FoM using similar indicators and what appear to be similar methods.³⁹

³⁸ Click counts or other manual efforts to observe actual movement are actual metrics, but they are proxies for FoM when it is not clear that more actual movement of, for example, motor vehicles on roads is equal to more FoM.

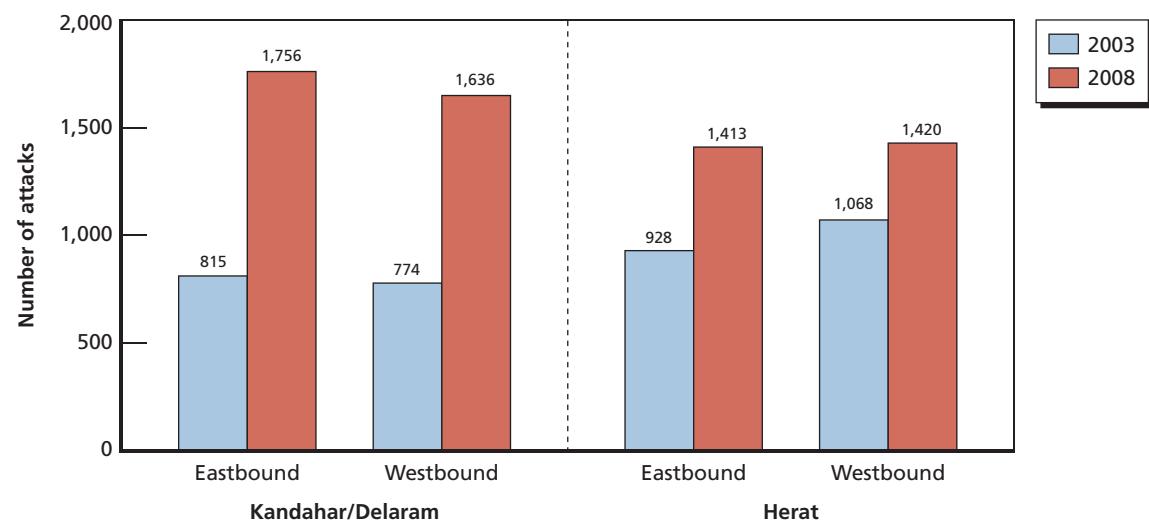
³⁹ The methodology for the CPAU project was described in a paper provided to the authors (Cooperation for Peace and Unity, undated).

U.S. Agency for International Development Assessment

The USAID report assesses the impact of FoM and infrastructure on socioeconomic development along the southern Ring Road and along provincial and district roads in Nangarhar, Kunar, Panjshir, Balkh, and Kunduz. The 2008 report compares its data with those in a similar 2003 report and also with a baseline study conducted using a separate methodology in 2004.⁴⁰ The researchers conducted a click count and type count of vehicle traffic at selected points along roads and surveyed people in a sample of villages in the areas studied. For example, part of the 2008 study relied on traffic counts for the southern Ring Road conducted between 6:00 a.m. and 8:00 p.m. local time over a seven-day period. Figure 3.6 is a sample chart from the click-count survey. It shows the number of vehicles traveling both east and west on two separate road sections (Kandahar/Delaram and Herat) in 2003 and 2008.⁴¹

The overall report incorporates a range of data, including ticket prices for bus travel, household income in affected areas, school attendance, mean distances to reach schools from home, average cost of travel, and time and distance to medical care by mode of travel. The study of the district and province roads (as defined by USAID) showed an increase in traffic on roads improved by USAID contracts and, in one case, a reduction in travel time by 50 percent.⁴² Assessment and recommendations in the report reflect a combination of physical data collection (click counts), research on existing indicators (bus ticket prices), and survey collection to determine perception and estimate travel times, the economic burden of travel, and the availability of services. This might be the most comprehensive FoM assessment conducted in Afghanistan to date.

Figure 3.6
Sample Click Count of Vehicle Traffic



SOURCE: USAID, 2008, Part I, p. 14.

RAND TR1014-3.6

⁴⁰ USAID, 2008, Part I, p. 11.

⁴¹ USAID, 2008, Part I, p. 14.

⁴² USAID, 2008, Part II, p. 2.

The utility of the USAID report for assessment staffs is that it shows how traffic volume data collection can be combined with other survey data to provide an impression of FoM that is broader than single-scope or single-factor analysis. However, as interesting and informative as the report may be, it is not clear that its findings can be correlated with other data to show causation or to show that actual movement is somehow related to support for GIROA; more traffic is not necessarily “better” in terms of achieving a given strategic end state.

Cooperation for Peace and Unity Assessment

The CPAU Human Security Project reports directly assess “freedom of movement and access to services.”⁴³ While they do not clearly define what FoM is or why it matters, they are among the only available province-level reports produced by a non-ISAF organization that directly address FoM as a separate category. Researchers collected data in nine districts across three provinces from January to March 2010 and then on a monthly basis from April to August 2010. The reports assess the cost and frequency of public transportation, informal taxes along specified roads, school attendance, and health service usage as proxy metrics for FoM. Figure 3.7 provides an example from a CPAU FoM report. The example uses scores from 0 to 5 based on estimated population sizes, with 0 indicating a very poor level of human security and 5 indicating a very high level of human security, which, in this case, might be loosely equated with civilian FoM.

The results seem to be presented on an ordered (ordinal) scale, but the way they are presented implies ratio scale properties. In other words, the numbers have no actual value that could be clearly equated with differences in ground truth, but they appear to have such value because they are presented in ratio increments. It is not possible to determine the difference between any two numbers in terms of real conditions on the ground. Note that in many cases the changes reported are minuscule (e.g., a factor of 0.02 on a 0–5 scale). This is misleading, because it is unlikely that any data set in COIN (other than ISAF casualty data) could be considered more than “reasonably accurate”; thus, a 1/100 (or even 2/100) change even on a 0–5 scale probably would not be accurate.⁴⁴ Small, incremental changes like this are probably not meaningful changes, particularly in the absence of a clear, definitive scale; after all, FoM changes often, rapidly, and unexpectedly. This kind of analysis can deliver precision without accuracy. The CPAU FoM reports offer some limited insight into FoM for civilians, but they could not be considered a comprehensive source for campaign assessment. Like the USAID report, they rely on a limited set of inputs to produce information that is at once very specific (district to district) and generalized (0–5 ordinal scores, use of a limited set of indicators that may or may not be relevant). Scoring adds a layer of complexity and opacity because it is not clear how the scores were developed, what they mean, or why they should be considered important in an overall assessment of FoM.

⁴³ Cooperation for Peace and Unity, 2010a, p. 9.

⁴⁴ The idea that such data are “reasonably accurate” at best is drawn from 14 months of research on Vietnam, Iraq, and Afghanistan COIN assessment. Thomas C. Thayer, the architect of Vietnam-era assessment at the U.S. Department of Defense and a chief COIN assessment analyst for nearly six years, used the phrase *reasonably accurate* to describe the more accurate and useful data sets in his analyses. See Thayer, 1985.

Table 3.1
Sample Freedom of Movement Scores

Indicator		Jalalabad				Muhammad Dara				Surkh Rud				
		April	May	June	Change	April	May	June	Change	April	May	June	Change	
Cost and frequency of public transportation	Afghanis per kilometer	3.33	1.67	3.75	0.41	3.80	0.88	3.77	-0.03	4.09	0.83	4.32	0.23	
	Journey per day × number of cars	1.07	2.07	2.94	1.87	0.89	1.46	0.88	-0.01	1.88	2.34	1.89	0.02	
	Total	2.20	2.78	3.34	1.14	2.35	2.83	2.33	-0.02	2.98	3.29	3.11	0.12	
Informal taxes for traveling on road		3.75	3.63	3.54	-0.21	5.00	4.00	4.13	-0.88	4.86	5.00	5.00	0.14	
Number of children in school			Second Quarter		Change	Second Quarter		Change	Second Quarter		Change			
	School attendance (male students, age 6–13) as percentage of potential attendance rate	4.50		0.00	4.88		0.00	3.47		0.00				
	School attendance (female students, age 6–13) as percentage of potential attendance rate	3.08		0.00	4.10		0.00	2.98		0.00				
	Total	3.80		0.00	4.50		0.00	3.23		0.00				
Number of patients using health care centers, by total population		3.17		0.00	2.07		0.00	0.27		0.00				
Returnee, internal displaced person, and migrant movements			April	May	June	Change	April	May	June	Change	April	May	June	Change
			4.07	5.00	5.00	0.93	-0.96	0.67	1.52	2.48	3.05	4.97	5.00	1.95
Cluster total		3.40		3.68	3.77	0.37	2.59	2.81	2.91	0.32	2.88	3.35	3.32	0.44

SOURCE: Cooperation for Peace and Unity, 2010a, p. 10.

Summary of Analysis

Historically, counterinsurgents have focused on ensuring FoM for friendly security forces, controlling civilian movement to isolate insurgents, and reducing FoM for insurgent cadres. In a few cases, counterinsurgents have also focused on improving civilian FoM, but it is not clear that any of these efforts have considered civilian FoM in the context of the strategic end state. While information on how counterinsurgents have assessed FoM in non-U.S. cases is limited, it seems that in at least some instances the host-nation government focused on developing civilian FoM to foster a sense of normalcy. U.S. COIN assessment has traditionally focused more on the near-term operational aspects of FoM and less on civilian FoM as a strategic end state.

In contrast to other campaigns, ISAF has focused on developing civilian FoM as a strategic end-state condition. Past and current FoM assessment at ISAF and IJC reflects a mix of approaches that rely on either a small set of proxy metrics or generalized reporting requirements that allowed subordinate staffs to develop and report FoM based on locally available information and local standards. Neither of these approaches is optimal; they represent best efforts in the absence of greater resources and a more complete understanding of FoM and its relevance to ISAF strategic objectives. The nature of FoM data collection and assessment efforts also reflects the lack of available data, difficulty in collecting relevant data through technical means, and possibly a reluctance to place undue collection and reporting burdens on subordinate commands.⁴⁵

While this report recommends definitions for FoM, the lack of a *precise* and broadly agreed-upon definition for all circumstances makes it difficult to task data collection: It is hard to collect information on something that is poorly defined and that changes unexpectedly and unevenly from place to place. Technical and other physical collection solutions can provide some insight into actual movement, and they can show choke points that might restrict FoM. Some technical collection and assessment (e.g., of imagery data, ground moving target indicator data) can be accomplished in Kabul, while other collection requires physical action on the part of tactical units. Physical collection may induce risk at the tactical level, so collection requirements deserve careful consideration. Technical and physical collection is most effective in assessing physical infrastructure, such as roads and bridges, and it can be very useful in assessing the ability of ISAF and ANSF personnel to move. It may be least useful in assessing the combined perceptual and actual aspects of civilian FoM.

Capturing perception data is a seemingly straightforward task, and a number of polls already capture some of this information. However, some polls do not have sufficient granularity to show context, few polling questions are precisely tied to a clear definition of FoM for the purposes of ISAF strategic assessment, and concerns with polling methodology, discussed earlier, limit the overall utility of this approach. There are a number of other resources that could help ISAF assess the perception of FoM among civilians and insurgents, but these resources are not necessarily structured to fit into existing assessment processes.

The use of proxy metrics to determine FoM is a logical practice in the absence of better information. Because the concept of FoM is nebulous, most metrics might be described as proxy metrics to some extent: Every metric (or indicator) provides insight into the undetermined variable of FoM. If a proxy metric can show correlation with an agreed-upon standard

⁴⁵ This last point is not empirically proven, but this sentiment was reflected in numerous conversations and interviews with ISAF and IJC staff members between late 2009 and early 2011.

for FoM, then it might be useful for assessment. However, in practice, it will show something less. The assessment staff will probably have to make some kind of subjective judgment as to how the metric does or does not provide insight into FoM. There are some conceptual problems with applying proxy metrics, such as attack reporting, to FoM assessment, and any proxy metric must be reported with clear caveats.

Third-party reports provide good insight into possible collection and analysis methods for FoM assessment. The USAID and CPAU reports were not designed to meet ISAF standards or to match up with ISAF objectives, but they show how click counts can provide potentially useful data and how physical collection is limited by the COIN operating environment. Perception polling at the village level might also be useful in providing local context, but using samples to represent areas not covered by polls is problematic in COIN because security situations and perceptions can vary greatly from village to village, depending on the relative presence of ISAF, ANSF, GIRQA officials, NGOs, and insurgents.

An analysis of past and current efforts to assess FoM revealed some innovative assessment efforts. It also revealed inherent limits in the ability to assess FoM through centralized theater assessment processes:

- It is difficult to find a metric or set of metrics that captures FoM cleanly and precisely.
- Efforts to gather more information can unduly burden subordinate commands.
- A lack of data undermines centralized assessment.
- Finding an effective, structured approach to FoM assessment will require some cost-benefit analysis and a balance between context and aggregation.

Assuming that ISAF will continue to assess civilian FoM as a strategic objective, or as an indicator of strategic progress, assessment staffs will have to determine how to reconcile the dichotomy between increasing civilian FoM as a strategic objective and controlling civilian FoM as an operational objective. Further, staffs will have to determine how to differentiate between the effects of purposeful control of civilian FoM and environmental or insurgent restrictions on that freedom. Contextual analysis will probably be necessary to unravel these complexities.

Recommendations

This chapter provides more detailed definitions for each of the five different categories of FoM discussed earlier in this report. It also includes recommendations that are intended to help develop or improve an FoM assessment process to support the development of campaign assessments. These recommendations are *methods for developing an assessment process* for FoM; they do not present a finished process with accompanying metrics.¹ Officially defining FoM, conducting objective-to-assessment analysis, and then defining collection requirements will require an up-to-date and detailed understanding of ISAF objectives and theater collection capabilities that is available only to ISAF staff. It will also require input from staff sections outside the assessment staff that will have equities in the definition of FoM and in the ways in which FoM data are collected and reported. And the very process of analyzing objectives for FoM should help ISAF clearly define the concept for both the campaign plan and Inteqal, identify metrics that might be of value, and eliminate metrics that might be unnecessary. External research could not hope to replicate that process. However, it can help guide it.

Assessment staffs should build their FoM assessment process on the understanding that sometimes FoM is desirable, but in many cases it is not. This understanding is paramount to developing and implementing a realistic assessment process, because any such process must account for purposeful reductions in FoM. Assessment must also address or at least acknowledge the fact that there are several categories of FoM that are related to, but not necessarily congruent with, civilian FoM.

There is no silver-bullet answer for the FoM assessment challenge. ISAF faces a complex task; assessing FoM will never be easy, and there will always be disagreement over definitions, methods, reporting, and goals. To provide a useful assessment of FoM, the staff will have to make subjective value judgments and perform cost-benefit analyses to determine what FoM means for ISAF, how it might be assessed, and what format reports will take. This chapter proposes a step-by-step analytic approach designed to help ISAF develop a useful and practical assessment process for FoM. Recommendations are derived from the research and findings presented in this report, but they are not immutable. Recommendations should be modified to meet practical realities or shifting objectives.

¹ We are aware that ISAF has received such finished products (particularly over the past two years) and that these products typically have not met ISAF requirements. This knowledge factored into the decision to provide ISAF with a process guide rather than a finished assessment report.

Proposed Definitions for Five Categories of Freedom of Movement

The purpose of providing recommended definitions is to help shape discussion of FoM within the ISAF staff and to give the staff a jumping-off point from which to develop official definitions. These definitions were developed over two analytic sessions using a blank-slate approach. Definitions were proposed, critiqued, discarded, and improved based on modified versions of the brainstorming and devil's advocate methodology as described in the U.S. government's *Tradecraft Primer*, as well as ongoing iterative discussion.² They represent subjective but informed analysis. No definition can capture all aspects of FoM, and no definition will fit all circumstances required to understand FoM in context. Therefore, these definitions are presented in an effort to narrow the problem of FoM assessment and to assist in linking FoM to objectives. Distinctions are drawn between similar categories (e.g., civilian and NGO) because, despite similarities, it is possible to have one type of FoM and not the other (e.g., civilians can move but NGOs face threats from local insurgents).

FoM for civilians: The ability and the perceived ability of Afghans (who do not work for the government, security forces, or NGOs or belong to insurgent groups) to move to and from a desired location at will and without undue danger, physical restriction, or economic burden in order to meet their needs.

Note that “needs” is intentionally undefined. It may refer to basic needs but should also encompass advanced needs, such as personal fulfillment; basic subsistence may not be sufficient to build support for GIRoA. “Undue” might be equated with peacetime criminal violence. Achieving FoM depends on the creation of a combination of actual freedom and the perception of freedom.

FoM for ISAF and ANSF: The ability and the perceived ability of ISAF and ANSF personnel to move to and from a desired location to achieve mission objectives without undue threat of attack or physical restriction.

Note that perception is included in this definition because the perception of threat can shape movement behavior by keeping convoys off specific routes or patrols on specific paths.

*FoM for GIRoA officials:*³ The ability and the perceived ability of government officials to move to and from their residences or offices to any area necessary to fulfill duties without undue threat of attack or physical restriction.

One of the most difficult aspects of assessing GIRoA officials' FoM will be to determine whether officials are free to travel outside of their daily job routines, if necessary, to excel in their duties. For example, a district governor can simply show up at the office every day, but constituents may be dissatisfied if he or she does not visit outlying areas in the district. Proxy

² See U.S. Government, 2009a, pp. 17, 27. This primer contains guidelines for conducting structured analytic exercises that are often used to proof or reinforce intelligence analysis. We modified the brainstorming and devil's advocate techniques to provide some structure to our analysis and efforts to develop well-defined and thoroughly critiqued definitions.

³ We do not address the criminal activity or insurgent support activities that some GIRoA officials might engage in. However, this added layer of complexity should be considered during the assessment process.

metrics that show officials sleeping in the areas where they work or showing up for work are helpful but probably not sufficient to determine FoM or overall success.

FoM for NGOs: The ability and the perceived ability of NGO staff to move to and from an area requiring services at will and without undue danger, physical restriction, or economic burden in order to meet needs.

This could apply to both local and international NGOs. While all NGOs share some characteristics, each deserves some degree of contextual analysis. Economic burden is included in the NGO definition because insurgent or government taxes might preclude the movement of poorly funded NGOs. Still, NGO FoM could be considered distinct from civilian FoM because insurgents and government officials view NGO workers differently than they view the average civilian. Civilians might have the freedom to move in areas where NGOs do not. Western government officials not under ISAF protection could also be considered in this category.

FoM for insurgents: The ability and perceived ability of insurgents to move to and from an area to transport supplies, conduct attacks, collect intelligence, or engage contacts without threat of attack, detention, or physical limitation.

Intelligence officials may use a separate definition or may have input into this definition. Perception matters to insurgents just as it does to ISAF and ANSF.

Division of Labor: Finding a Balance Between Bottom-Up and Centralized Assessment

Research for this report showed that context shapes the availability and meaning of FoM data, and FoM can mean different things to different groups in different areas over different periods. Aggregation of FoM data can hide important distinctions at lower levels, particularly because active ISAF or ANSF control measures can decrease perceived and actual (physical) FoM. Moreover, even in its most general sense, FoM can be good or bad for ISAF in different circumstances. Therefore, some part of the FoM assessment process should strive to capture contextual assessment. The best way to develop context in assessment is from the bottom up. Therefore, it makes sense to delegate some or a good portion of FoM assessment to subordinate commands at the RC level and below. This approach is already in place for many categories of assessment, and RCs sometimes produce FoM assessment reports or describe FoM in their assessments. It would help ISAF determine overall progress if there was some consistency to this reporting. However, an overly structured or directive process would be counterproductive because it would reduce the flexibility required to provide an accurate and contextual assessment.

We recommend a twofold approach to FoM assessment. This approach seeks to meet existing requirements to conduct centralized assessment of (generally) quantitative data and the need to obtain relevant contextual assessment.

Contextual, Bottom-Up Assessment of Freedom of Movement

ISAF clearly defines all relevant categories of FoM and clearly ties them to objectives, then presents this analysis as a comprehensive but loosely guided requirement to subordinate commands.

In essence, the process tells ISAF, “Here is what FoM is in general terms, here is why it matters strategically, and here is what we need from you in the form of a finished assessment.” The finished assessment should be narrative in format but can contain quantitative data, imagery, and maps as long as they are described in context. ISAF assessment staffs could create a template for this assessment that includes a definition of FoM, the objectives, and the categories for reporting. These reports could be collected at the theater level, analyzed and compared with the centralized assessment, and incorporated into finished theater products. The battalion staff would probably be the first point at which bottom-up assessment could begin, with input from units subordinate to the battalion.

Centralized Assessment of Collected and Available Data

ISAF continues to conduct centralized assessment of both collected and readily available information to develop a holistic theater-wide understanding of FoM that adequately takes into account its context-dependent interpretations. Because aggregation reduces context in regional reporting, centralized assessment should focus on areas of interest that require less context, that have a relatively homogeneous and well-understood context, and that are more easily assessed through aggregation or technical means. For example, polling data should be compared at the subregional level with other indicators to determine FoM in context, but national sentiment can continue to be assessed through national polling. ISAF and ANSF FoM might be assessed by the theater assessment staff using GPS data or formal reporting. Infrastructure analysis can be used to feed centralized assessment of physical movement restrictions that might affect FoM.

Building a Freedom of Movement Assessment Process

This is a guide—and only a guide—that an assessment staff might use to conduct a step-by-step analysis of FoM assessment for both the ISAF campaign plan and the Inteqal transition plan. The proposed process is derived from research conducted for this report and from research conducted since November 2009 and for the U.S. Marine Corps Intelligence Activity examining the assessment process in Afghanistan from the RC to the NATO level.⁴

It might be necessary to develop two separate processes to meet the different needs of each plan, particularly since GIRoA leads the Inteqal assessment process. While an outside organization could be tasked with producing an FoM assessment methodology, the process of developing a course of action internally will help ensure that the finished product reflects the capabilities of the staff, the realities of collection and analytic capabilities, and the immediate requirements of senior decisionmakers in ISAF. It will allow structured input from other staff sections—particularly IJC, the RCs, and ISAF operations, intelligence, and movement-control staffs—to ensure that FoM assessment is generally understood and reflects capabilities and limitations across the theater. RCs will be particularly well positioned to inform ISAF assessment staffs on collection, cost-benefit calculations, and risk analysis.

⁴ Connable, 2010a, 2010b.

This step-by-step process should also help the staff to identify and uncover data sources and check long-standing assumptions regarding the campaign and transition assessment processes:

1. *Agree upon a clear definition of FoM for each category that might be considered for assessment.* The staffs should also consider at this point whether categories could be combined, or other categories added, but they should be willing to revisit this issue as the assessment process develops. This first step will help staffs decide what FoM is and whether or how they should proceed in developing an FoM assessment methodology.
2. *Decide whether to assess FoM as a strategic MOE or just use some FoM-related indicators to feed other categories of assessment.* Unless there is a stated requirement for ISAF to assess FoM holistically, there is no practical reason that the staff could not break apart elements of FoM and address them as separate issues or use them to feed existing assessment categories. For example, perception assessment for FoM could remain rolled into the overall assessment of Afghan perceptions of security, government control, and infrastructure development, while physical infrastructure assessment could remain specifically focused on movement access.
3. *Determine which objectives require the assessment of FoM and which categories of FoM are relevant, and why.* Assuming ISAF will produce holistic FoM assessments, staffs should clearly tie the assessment of FoM to each identified objective. For example, if a strategic objective is to ensure the security of the population, then civilian FoM could be identified as both a condition within this objective (in other words, an MOE) and an indicator. This objective might also require subordinate MOEs linked to FoM for ANSF and GIRoA officials.
4. *Based on step 2, develop a narrative explanation describing how and why FoM is relevant to each objective.* This narrative will be used to shape the assessment process, justify collection requirements, help subordinate commands understand the requirement for FoM collection and assessment, and help shape analysis and reporting once data have been collected.
5. *Determine how FoM will be assessed.* Before metrics are selected and collection requirements are issued, staffs should determine how they will assess FoM, where assessment will take place, and why. Will they push some of the assessment requirements down to the IJC or RC staff (which would then translate these requirements down to the battalion level), or will they assume responsibility for the entire process? Exactly what will be assessed at the theater level? Only this centralized process should generate data collection and reporting requirements from major subordinate commands (e.g., RCs, special operations units). It is also important to identify friendly operations designed to improve FoM and consider specific methods to assess the success or failure of these operations.
6. *For centralized assessment, develop standards for the collection and reporting of data to the center.* Centralized assessment should define and describe exactly what is to be collected, how it is to be collected, why it is to be collected (in detail), and how the information will be used. It should ensure that the data make clear whether FoM is a good or bad condition under the circumstances in question. Theater staffs should create reporting formats and easy-to-use data pathways for report submission. Subordinate commands are more likely to comply in terms of timeliness, precision, and accuracy when their

staffs and tactical units have a clear understanding of not only their requirements but also the reasons for collection and reporting; they may be required to assume some risk to collect and report FoM data. Setting clear standards will help ensure the reliability of the reporting process.⁵

7. *For subordinate assessment, develop broad requirements for FoM assessment.* This report recommends that RCs or subordinate echelons be given leeway to develop and write their own FoM assessments for incorporation into the campaign and transition plans. This process will help the theater assessment staff address the inherent inconsistencies in the process of applying centralized assessment standards to what is an inherently decentralized operation and environment. These assessments will necessarily be written to different standards and will incorporate varying types of information. However, the theater staff could provide a simple narrative reporting template to ensure some consistency between reports from area to area. Also, basic standards for reporting should be furnished (e.g., what the reports should describe, how the reports should be tied to both subordinate and theater objectives).
8. *Build a collection plan for centralized collection.* Once data requirements for the centralized portion of the assessment process have been determined, staffs derive data requirements and determine collection requirements. The first step in this process is to identify existing data sources that could meet the needs of the FoM assessment; if it is not necessary to levy additional requirements on IJC or the RCs, those requirements should be avoided. The collection plan should focus at least in part on determining what civilians want from FoM in each specific area of concern. What is the standard for assessment? This will probably not be easy to determine, but it should be considered. This point is discussed in greater detail in the next section.
9. *Determine how FoM data will be incorporated into the theater assessment process.* Once staffs have determined how FoM will be assessed, they should consider how FoM will be compared and contrasted with other information during the production of the holistic monthly, quarterly, and semiannual assessments.

This step-by-step process is captured in Figure 4.1. These steps could be addressed in a different order than presented in the list or the figure.

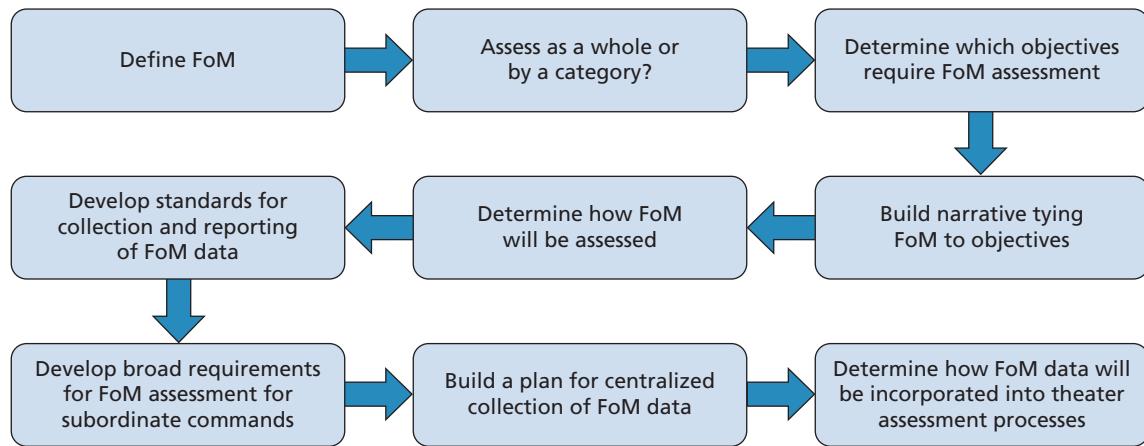
Collection of Data for Centralized Freedom of Movement Assessment

Metrics development and data collection requirements should be immediately derived from a structured analysis of the linkage between objectives and FoM. Any data collection requirement levied on subordinate commands should be considered only after all available data sources have been identified, vetted, and considered for use. This is a list of recommended considerations for use in shaping data collection requirements:

- *Perform both a cost-benefit analysis and a risk assessment of each collection requirement.* Include subordinate commands in the analysis and assessment. Use this process to deter-

⁵ It would also be useful to explain to subordinate staffs what they will receive in return for their efforts. Will there be some kind of value-added assessment produced by ISAF's Afghan Assessment Group that is designed to inform RC staffs?

Figure 4.1
Recommended Steps for Developing a Freedom of Movement Assessment Process



RAND TR1014-4.1

mine the practical trade-offs between the collection of these particular data and the performance of other missions, as well as the risk that the collection requirement might induce at the tactical level. This process should inform rather than preclude outright the development of collection requirements; sometimes, cost and risk are warranted.

- *Leverage existing intelligence information that may not already be incorporated into the kind of finished intelligence products that are normally promulgated within the ISAF staff.* This information can be particularly useful in describing insurgent FoM and in identifying infrastructure problems.
- *Conduct traffic volume collection (technical collection of vehicle movement) only when this collection is understood to show a narrow picture of movement (typically) within a snapshot of time.* Sampling movement data for extrapolation at the province or theater level would not be advised due to the complexity and volatility of the environment.
- *Further explore technical means for collecting movement data.* These means should be pursued only to support limited, focused objectives in specific areas. There is probably not a comprehensive technical solution to the FoM assessment challenge.
- *Reexamine polling questions at both the ISAF and subordinate levels to ensure that FoM-related questions directly reflect the requirements implied in strategic objectives.* Whenever possible, FoM polling questions should be shaped to meet local conditions and tactical command requirements for information. Polls should undergo regular review to ensure that questions are appropriate and relevant to shifting objectives, that standards for collection are maintained, and that adjustments to the assessment process are accounted for.
- *Collection requirements should also feed subordinate requirements for information.* Whenever possible, collection requirements should be sent to subordinate commands for comment and proposed modification prior to issuing a data collection requirement.

Considerations for Assessing Freedom of Movement

The following are some additional considerations for the development of an FoM assessment process:

- How should assessment differentiate between the five types of FoM identified in this report, if at all? Which data are useful for which type of FoM assessment, and which are useful for more than one type?
- What is “normal” or “desirable” FoM from area to area? What do civilians want? Is it sufficient to be “satisfied” with security, or do they want more? It is difficult, if not impossible, to assess civilian FoM without first understanding local needs.
- How can perception information be captured in a way that reflects local conditions and local needs (i.e., context), but in a format that can be aggregated?
- What are the various characteristics of physical threats, and how can information on these threats be captured?
- What is the confluence between perception and physical FoM in a specific area and across the theater?
- How can perception data be compared with physical reporting data in a way that produces an accurate, holistic picture of FoM?
- Are there elements of FoM that it is not possible to assess? Why?
- How should caveats be applied to FoM assessment to ensure that findings do not exceed either the available data or methodology?

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